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EXPORT CONTROLS

HEARINGS

BEFORE THE

SUBCOMMITTEE ON INTERNATIONAL FINANCE AND MONETARY POLICY

OF THE

COMMITTEE ON

BANKING, HOUSING, AND URBAN AFFAIRS

UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

THE CURRENT SYSTEM OF U.S. AND MULTILATERAL NATIONAL SECURITY EXPORT CONTROLS AND TO SEEK STRATEGIES TO REGULATE INTERNATIONAL TECHNOLOGY TRANSFER IN SUCH A MANNER AS TO ACHIEVE A DESIRABLE BALANCE AMONG THE NATIONAL OBJECTIVES OF MILITARY SECURITY, ECONOMIC VITALITY, AND SCIENTIFIC AND TECHNOLOGICAL ADVANCE

MARCH 12 AND 17, 1987

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EXPORT CONTROLS

THURSDAY, MARCH 12, 1987

U.S. Senate, Committee on Banking, Housing, and Urban Affairs, Subcommittee on International Finance and Monetary Policy,

Washington, DC.

The subcommittee met at 9:35 a.m., in room SD-538 of the Senate Dirksen Office Building, Senator Paul S. Sarbanes (chairman of the subcommittee) presiding.

Present: Senators Sarbanes, Proxmire, Dixon, Graham, Heinz, Gramm, and Chafee.

OPENING STATEMENT OF SENATOR SARBANES

Senator Sarbanes. The subcommittee will come to order.

I am pleased to open this hearing this morning. It is the first in a series which the Subcommittee on International Finance and Monetary Policy of the Committee on Banking, Housing, and Urban Affairs, will be carrying out in this Congress. The agenda for the subcommittee over the next few weeks is ambitious.

As you know, the majority leader has indicated that he hopes to have a trade bill on the floor of the Senate sometime in May and has asked all committees that have jurisdiction over matters relating to trade to report out legislation by that date.

Senators Proxmire and Garn, the chairman and ranking member of the full committee, and Senator Heinz, who is the ranking member of the subcomittee, and myself, have all informed the majority leader of the intention of the Banking Committee to meet that deadline. As a consequence, over the next few weeks, we will be holding hearings. The hearing this morning is on export controls. There will be another hearing next week on Third World debt, on exchange rates and on export promotion, all preparatory to considering legislation prior to the May 1, 1987 deadline.

It is probably worth noting that in the last Congress the committee reported out legislation dealing with some of these issues in anticipation of a trade bill in that Congress, but as things developed, the full Senate did not consider trade legislation last year.

This morning's hearing will address the issue of export controls.

We are very pleased to have as our lead witness, the able and distinguished Secretary of Commerce, Malcolm Baldrige. He will be followed by a distinguished panel from the National Academy of Sciences, which recently released a widely discussed report on export controls. We will also hear from the Acting Under Secretary of State, Edward Derwinski and Assistant Secretary of Defense for

International Security, Richard Perle, after which we will conclude this morning's hearing.

This is an issue which has attracted, of course, considerable attention. It is one that is complex. In fact, there's a story in this morning paper which makes a comment about the complexity of the trade, national security, and economic issues surrounding the export question.

So we look forward to the probing into this matter in some detail, as we consider what, if any, changes ought to be made in the current statutory arrangement.

Senator Dixon, do you have any comments?

OPENING STATEMENT OF SENATOR DIXON

Senator DIXON. Thank you, Mr. Chairman. Mr. Chairman, I am pleased to be here this morning as we discuss Export Administration Act issues, including the National Academy of Sciences' study and the legislation cosponsored by my warm friend from Pennsylvania, Senator Heinz, and myself. Our legislation, as you know, Mr. Chairman, is designed to reduce the licensing burden American exporters now face. Last year the Department of Commerce handled roughly 120,000 individual export license applications. Our bill cuts that number in half to roughly 60,000. This will enable the administration to concentrate its efforts on the items that really need careful review by helping to better focus licensing decisions. It will, therefore, help improve enforcement of the Export Administration Act, enabling the act to better accomplish its goal of denying the Soviet Union and its allies access to certain high technology that can add to their military capabilities.

As a member of the Senate Armed Services Committee, I am well aware of the Soviets' efforts to acquire United States and other free world high technology. I know we must make strong and effective efforts to deny the Soviets to these items or at least delay their ability to acquire them. The key word, however, Mr. Chairman is "effective," and unfortunately, our export licensing and control regime has not been as effective as it should be. We need to face the fact that in many, if not most, areas of technology, we are no longer ahead of our industrial competitors.

Unilateral controls don't end up denying the Eastern bloc access to the items controlled. They just deny American companies the sales. We need to recognize that for controls to be effective, they must be multilateral. Our efforts must, therefore, be concentrated in that area. We also need to recognize that controls cannot be effective, if we are trying to control too much. The control list should be realistic, so that the truly critical decisions get the kind of careful review that is so necessary.

I want to take this opportunity to congratulate the Secretary of Commerce for his efforts to streamline export controls and improve our export competitiveness. I also understand that my very good friend, Ed Derwinski of Illinois, will be a witness later this morning. He is the former distinguished congressman from my state, a very valuable person on the State Department.

I will not take more of the time of the committee, Mr. Chairman. I look forward to the testimony of all of today's witnesses, and I welcome Secretary Baldrige.

Senator SARBANES. Thank you, Senator Dixon. Senator Graham?

Senator GRAHAM. No opening statement.

Senator SARBANES. Senator Gramm.

Senator GRAMM. No opening statement, Mr. Chairman.

Senator SARBANES. Mr. Secretary, we are pleased to have you before the subcommittee. We look forward to hearing your testimony.

STATEMENT OF MALCOLM BALDRIGE, SECRETARY OF COMMERCE, ACCOMPANIED BY PAUL FREEDENBERG, ASSISTANT SECRETARY FOR TRADE ADMINISTRATION

Secretary BALDRIGE. Thank you very much, Mr. Chairman.

We have made some significant strides over the past 6 years in stemming the flow of Western technology to the Soviets. In our zeal, however, we may have allowed the pendulum to swing too far, and as a result, unnecessarily impeded the flow of nonstrategic trade. We are taking steps now to correct this.

The regulatory changes I have proposed, coupled with the legislative proposals in the President's competitiveness initiative, will bring about the balance we have all been seeking to protect the national security without impeding legitimate trade.

National security, we have to remember, Mr. Chairman, is comprised of both economic and military security. American companies must be healthy and productive, if we are going to count on them for many of the technological breakthroughs that are so vital to our Nation's defense. We must stop subjecting to undue controls the very same private sector companies upon which we rely to keep us techologically superior to our adversaries, and we must limit the role of Government to doing only that which is truly necessary to protect national security. Below that point, Government should get out of the way and let American business go about its business of selling quality products at competitive prices and providing jobs in the United States.

EXPORT CONTROLS COST U.S. BUSINESS

I can provide you many examples of instances where export controls have cost us business and made us less competitive in the international marketplace. Here are just a few.

There is a multibillion dollar European electronics company that has indicated it is deliberately avoiding American components for its products to avoid the U.S. reexport controls on those products. It believes that such reexport controls are unreasonable, exterritorial infringement on its home country's sovereignty and shipments to the East should be controlled through the usual Coordinating Committee [CoCom] procedures.

Another major multibillion dollar European electronics and capital goods firm made the decision to design and build its own array processors to avoid the hassles and delays inherent in our export control system. That decision deprived a Massachusetts company of one-third of its overseas sales. If it were not for U.S. export control regulations, that loss of sales would never have occurred, since it was uneconomic for the European company to make its own components.

Last year, a major British aerospace company sent a letter to its suppliers telling them to avoid American parts wherever possible, to avoid the uncertainties and delays inherent in the U.S. export control system.

I could go on and on, but those are representative examples of large companies that have had large losses of sales. We have been able to correct some of that. For example, we eliminated the unilateral controls we have on oil and gas equipment to the USSR. The same thing happened there. The Soviets built up other sources of supply, who originally did not have the technical expertise that we did, but now do.

We, in the administration, want to eliminate these situations with controls that vitally affect U.S. companies without significantly contributing to national security. The President's competitive initiatives contain several export control reforms.

Specifically, he has called for decontrol of those technologies that offer no serious threat to U.S. security. The administration bill would require us to negotiate with our CoCom partners to reduce the international controls.

Two, the President wants to strengthen controls on those goods and technologies that are truly strategic. We must assure the controls that are necessary and effective are put in place and enforced. This involves making some minor improvements to the enforcement provisions of the EAA, as well as ensuring that we have well-qualified and well-trained enforcement officers. This step goes hand in hand with decontrolling those goods and technologies that are no longer truly strategic, so we don't waste time on them.

COOPERATION OF COCOM ALLIES

Three, making procedures uniform and enforcement uniformly rigorous. To protect our national security, it is important that each CoCom ally enforce its export control laws. We must work within CoCom to reach agreement on uniform procedures and rigorous enforcement.

Four, strengthening multilateral controls over products and technologies that can contribute to Soviet military capabilities. To achieve this goal, the administration bill would establish specific guidelines for U.S. participation in CoCom negotiations. These negotiations are advisable, because unilateral U.S. controls are generally ineffective, and enforcement by all CoCom members is essential to effective multilateral controls. I can't emphasize that enough, Mr. Chairman. We have seen that too often.

The strength of the control system depends on the cooperation we get from our allies. This bill also provides that the United States should encourage CoCom governments to reach and carry out agreements with non-CoCom countries in restricting strategic exports to the controlled countries.

Fifth, eliminating unilateral controls in those areas where there is widespread foreign availability, and defining "foreign available." The Administration will provide specific deadlines for foreign availability determinations involving controlled countries and for a grace period to allow consultations regarding decontrol.

In making these foreign availability determinations, Commerce will consult with other agencies, but their concurrence is not required. So we hope that that avenue will be successful.

The bill also requires that when a licensable product is available to a Free World country, the license should be granted within 20 days, with a 15-day extension possible, unless an unacceptable risk of diversion is demonstrated.

Sixth, reducing the licensing time by at least a third and implementing a fair, equitable and timely dispute resolution process. This is very important for our program. Last year we did reduce average license processing time from 30 days to 20 days. We reduced it by a third. The President wants us to reduce it by another third this year, from 20 days to 14 days. We will meet that new deadline. We are working with other agencies to improve interagency coordination and dispute resolution mechanism and to bring about an expansion of the role of the Export Administration Review Board.

EASING OF HIGH-TECHNOLOGY TRADE WITH PRC

Seventh, further easing high-technology trade with the People's Republic of China [PRC]. As part of this effort, the administration bill will allow items to be exported to the PRC under the distribution license. In addition, we will review with our CoCom allies specific ways to raise the level of technology that can be exported to the PRC.

Consistent with these legislative initiatives, Commerce has already made considerable strides in reducing unnecessary burdens on U.S. industry through improvements in our export control procedures. Specifically, we have in the past year installed a new audio response unit that automatically handles requests for status checks on export license applications.

We also raised the processing data rate levels of computers eligible for export under the distribution license program. This will eliminate about 5000 licenses a year.

We have reduced the paperwork burden on the export community by authorizing a 24-month validity period for individual validated licenses.

We have expanded our export control seminar program both here and abroad, and have established a general license for CoCom countries called G-Com to authorize exports of some commodities to CoCom countries without an individual validated license. We estimate that that change eliminated the need to process about 12,000 applications in fiscal year 1986. We have also made several proposals that cut across all seven of the President's export control initiatives.

First, we've published in the Federal Register on February 20, two new general licenses which will reduce the licensing burden on U.S. exporters. The General License Cooperating Governments (G–CG) provides for virtually unrestricted exports to government departments and agencies at the national level in cooperating countries. This means, for example, that if a CoCom Government buys controlled goods from a U.S. company, we no longer need to license that on the obvious assumpton that: it is a CoCom government, they are abiding by the same CoCom rules that we are, and we don't need to license the goods. Our General License for Certified End Users removes the licensing requirement for certain exports to commercial enterprises that we certify are controlled by CoCom governments. In short, if a CoCom government controls a company we look at the company in the same light, inasmuch as they don't need a license, as the government itself.

Third, we've started interagency discussions to achieve the elimination of licensing requirements for certain low level exports to our non-CoCom trading partners in the Free World.

Fourth, we are exploring procedures that would allow foreign manufacturers to incorporate U.S.-origin parts and components without having to obtain reexport authorization from the U.S. Government.

FOREIGN POLICY CONTROLS

Mr. Chairman, with one exception, on January 20 of this year, we extended for year foreign policy controls imposed under the authority of the Export Administration Act. In extending controls, the Department took into account the recommendations of the Secretary of State and the criteria outlined in the Export Administration Act. After a thorough review, we decided *not* to extend our controls on exports of nonstrategic oil and gas equipment and technology to the Soviet Union and to allow these controls to expire.

The report I submitted in January complies with all the legislative requirements for extending foreign policy controls.

The major focus this year was a review of the restrictions on exports of nonstrategic oil and gas equipment and technology to the Soviet Union. When these controls were imposed in 1979, they served the immediate purpose of expressing our displeasure over Soviet human rights' policies. Over time, however, the public mind no longer associated the controls with this purpose, and their effectiveness was undermined by widespread foreign availability. In the end, we decided it was no longer in the national interest to maintain these controls. That decision was important to the business community. Export controls must and will be brought into balance. We must now make sure that the costs of our controls do not exceed their intended foreign policy and national security objectives.

While we intend to move forward quickly on the proposals I have outlined, our actions will be carefully measured to ensure that appropriate steps are taken during the Reagan administration to safeguard our Nation's security.

This is what the EAA statute intends.

Last, I would like to mention two other aspects of the President's competitive proposals that are within the purview of the Department of Commerce and within the jurisdiction of this committee. We need to amend the Export Trading Companies Act, because we need to remove uncertainties in that law to take advantage of the shift in exchange rates to get the program back on track.

And second, the Foreign Corrupt Practices Act, we need to clarify vague bribery statutes, so that companies will not be prevented to take necessary steps to compete in international markets.

While these issues are not the focus of my remarks this morning, I would urge the committee, respectfully, to hold hearings on these important topics.

Mr. Chairman, that concludes my statement. I will be glad to respond to any questions that you or any other member of the committee may have.

[The complete prepared statement of Malcolm Baldrige follows:]

STATEMENT BY

SECRETARY OF COMMERCE
MALCOLM BALDRIGE

BEFORE THE

SUBCOMMITTEE ON INTERNATIONAL FINANCE
AND MONETARY POLICY OF THE
COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS

U.S. SENATE

MARCH 12, 1987

MR. CHAIRMAN:

THANK YOU FOR THE OPPORTUNITY TO APPEAR BEFORE THIS COMMITTEE AND TO TALK ABOUT U.S. EXPORT CONTROLS AND COMPETITIVENESS.

WE HAVE MADE SIGNIFICANT STRIDES OVER THE PAST SIX YEARS IN STEMMING THE FLOW OF WESTERN TECHNOLOGY TO THE SOVIETS. IN OUR ZEAL, HOWEVER, WE MAY HAVE ALLOWED THE PENDULUM TO SWING TOO FAR, AND AS A RESULT, UNNECESSARILY IMPEDED THE FLOW OF NON-STRATEGIC TRADE. WE ARE NOW TAKING STEPS TO CORRECT THIS. THE REGULATORY CHANGES I HAVE PROPOSED, COUPLED WITH THE LEGISLATIVE PROPOSALS IN THE PRESIDENT'S COMPETITIVENESS INITIATIVE, WILL BRING ABOUT THE BALANCE WE HAVE ALL BEEN SEEKING TO PROTECTING NATIONAL SECURITY WITHOUT IMPEDING LEGITIMATE TRADE.

NATIONAL SECURITY DEMANDS A STRONG INDUSTRIAL BASE, AND THIS INDUSTRIAL BASE DEPENDS ON THE STRENGTH AND VIGOR OF OUR ECONOMY. AMERICAN COMPANIES MUST BE HEALTHY AND PRODUCTIVE IF WE ARE TO COUNT ON THEM FOR MANY OF THE TECHNOLOGICAL BREAKTHROUGHS SO VITAL TO OUR NATION'S DEFENSE. WE MUST NOT CONTINUE TO BITE THE HAND THAT FEEDS US. NATIONAL SECURITY IS COMPRISED OF BOTH ECONOMIC AND MILITARY SECURITY. WE MUST STOP SUBJECTING TO UNDUE CONTROLS THE VERY SAME PRIVATE SECTOR COMPANIES UPON WHICH WE RELY TO KEEP US TECHNOLOGICALLY SUPERIOR TO OUR ADVERSARIES. WE MUST LIMIT THE ROLE OF GOVERNMENT TO DOING ONLY THAT WHICH IS TRULY NECESSARY TO PROTECT NATIONAL SECURITY. AT THAT POINT, GOVERNMENT SHOULD GET OUT OF THE WAY AND LET AMERICAN BUSINESS GO ABOUT ITS BUSINESS OF SELLING QUALITY PRODUCTS AT COMPETITIVE

PRICES AND PROVIDING JOBS.

I CAN PROVIDE YOU MANY EXAMPLES OF INSTANCES WHERE UNNECESSARY EXPORT CONTROLS HAVE COST US BUSINESS AND MADE US LESS COMPETITIVE IN THE INTERNATIONAL MARKETPLACE. HERE ARE JUST A FEW.

ONE MULTI-BILLION DOLLAR EUROPEAN ELECTRONICS COMPANY HAS NOTED THAT IT IS DELIBERATELY AVOIDING AMERICAN COMPONENTS FOR ITS PRODUCTS TO AVOID U.S. REEXPORT CONTROLS ON THOSE PRODUCTS. IT BELIEVES THAT SUCH REEXPORT CONTROLS ARE AN UNREASONABLE EXTRATERRITORIAL INFRINGEMENT ON ITS HOME COUNTRY'S SOVEREIGNTY AND THAT SHIPMENTS TO THE EAST SHOULD BE CONTROLLED THROUGH THE NORMAL COCOM PROCEDURES.

ANOTHER MAJOR MULTI-BILLION DOLLAR EUROPEAN ELECTRONICS AND CAPITAL GOODS COMPANY MADE THE DECISION TO DESIGN AND BUILD ITS OWN ARRAY PROCESSORS TO AVOID THE HASSLES AND DELAYS INHERENT IN OUR EXPORT CONTROL SYSTEM. THAT DECISION DEPRIVED A MASSACHUSETTS COMPANY OF ONE-THIRD OF ITS OVERSEAS SALES. EXCEPT FOR U.S. EXPORT CONTROL REGULATIONS, THAT LOSS OF SALES WOULD NEVER HAVE OCCURRED, SINCE IT WAS UNECONOMIC FOR THE EUROPEAN COMPANY TO MAKE ITS OWN COMPONENT IN THIS CASE.

FINALLY, LAST YEAR, A MAJOR BRITISH AEROSPACE COMPANY SENT A LETTER TO ITS SUPPLIERS TELLING THEM TO AVOID AMERICAN PARTS WHENEVER POSSIBLE TO AVOID THE UNCERTAINTIES AND DELAYS INHERENT IN THE U.S. EXPORT CONTROL SYSTEM.

WE IN THE ADMINISTRATION ARE TRYING TO CORRECT THIS DILEMMA BY PROPOSING A NUMBER OF EXPORT CONTROL REFORMS. BEFORE DISCUSSING OUR REFORMS, LET ME REVIEW WITH YOU OTHER ASPECTS OF THE PRESIDENT'S COMPETITIVENESS PROGRAM. ON JANUARY 27, THE PRESIDENT ESTABLISHED THE GOAL OF ASSURING AMERICAN COMPETITIVE PREEMINENCE INTO THE 21ST CENTURY. HIS PROGRAM INCLUDES:

1. INCREASING INVESTMENT IN HUMAN AND INTELLECTUAL CAPITAL;
2. PROMOTING THE DEVELOPMENT OF SCIENCE AND TECHNOLOGY;
3. BETTER PROTECTING OF INTELLECTUAL PROPERTY;
4. ENACTING ESSENTIAL LEGAL AND REGULATORY REFORMS;
5. SHAPING THE INTERNATIONAL ECONOMIC ENVIRONMENT; AND,
6. ELIMINATING THE BUDGET DEFICIT.

THIS INITIATIVE REPRESENTS A GOVERNMENT PARTNERSHIP WITH OUR PRIVATE SECTOR TO RAISE U.S. COMPETITIVENESS IN THE INTERNATIONAL MARKETPLACE. THE PRESIDENT HAS ESTABLISHED A COMPREHENSIVE PROGRAM TO ENLIST THE BROAD RESOURCES OF THE FEDERAL GOVERNMENT IN ACHIEVING THESE GOALS. WE ARE UNDER NO ILLUSION THAT FURTHER GOVERNMENT INVOLVEMENT IN THE PRIVATE SECTOR IS A PANACEA FOR IMPROVING OUR COMPETITIVENESS. IN FACT, MANY OF OUR PROPOSALS ARE BASED ON THE NEED TO REDUCE FURTHER GOVERNMENT'S ROLE IN PRIVATE SECTOR AFFAIRS. BUT, ESSENTIALLY, IT IS A PARTNERSHIP WE

ARE SEEKING.

OUR BUSINESSES ARE NOW TAKING THE NECESSARY STEPS, SOMETIMES PAINFUL ONES, TO IMPROVE THEIR COMPETITIVE POSITION. THEY ARE CUTTING THEIR OVERHEAD AND OTHER COSTS, INCREASING THEIR INVESTMENT IN R&D, AND IMPROVING THE QUALITY OF THEIR PRODUCTS AND SERVICES.

THE BUSINESS COMMUNITY IS SHOULDERING ITS SHARE OF THE BURDEN, AND WE IN GOVERNMENT ARE SHOULDERING OURS. WITH REGARD TO EXPORT CONTROL REFORM, THE PRESIDENT HAS CALLED FOR A BETTER BALANCING OF OUR SECURITY AND COMMERCIAL INTERESTS. THUS, THE PRESIDENT'S COMPETITIVENESS PROGRAM WILL PURSUE:

1. DECONTROL OF THOSE TECHNOLOGIES THAT OFFER NO SERIOUS THREAT TO U.S. SECURITY. THE ADMINISTRATION BILL WOULD AMEND THE EXPORT ADMINISTRATION ACT (EAA) TO ESTABLISH AS ONE OF OUR NEGOTIATING OBJECTIVES TO SEEK AN AGREEMENT IN COCOM TO REMOVE ITEMS FROM THE INTERNATIONAL CONTROL LIST THAT ARE AVAILABLE TO CONTROLLED COUNTRIES OR THAT NO LONGER MEET THE STRATEGIC CRITERIA OF COCOM.

2. STRENGTHENING CONTROLS ON THOSE GOODS AND TECHNOLOGIES THAT ARE TRULY STRATEGIC. WHERE U.S. SECURITY WOULD BE SIGNIFICANTLY AFFECTED IF OUR ADVERSARIES WERE TO OBTAIN PARTICULAR CONTROLLED COMMODITIES, WE MUST ENSURE THAT CONTROLS ON SUCH COMMODITIES ARE EFFECTIVELY IMPLEMENTED AND ENFORCED. THIS INVOLVES MAKING SOME MINOR IMPROVEMENTS TO THE ENFORCEMENT PROVISIONS OF THE EAA, AS WELL AS ENSURING THAT WE HAVE WELL-QUALIFIED AND WELL-TRAINED ENFORCEMENT OFFICERS. THIS STEP GOES HAND-IN-HAND WITH DECONTROLLING THOSE GOODS AND TECHNOLOGIES THAT ARE NO LONGER TRULY STRATEGIC.

3. MAKING PROCEDURES UNIFORM AND ENFORCEMENT UNIFORMLY RIGOROUS. WE ARE PURSUING DISCUSSIONS WITH OUR COCOM ALLIES IN AN EFFORT TO REACH AGREEMENT ON ACTIONS THAT EACH MEMBER CAN TAKE TO MORE UNIFORMLY CARRY OUT EXPORT CONTROL PROCEDURES AND TO IMPROVE ENFORCEMENT. SUCH EFFORTS ARE A REQUISITE FOR MULTILATERAL SECURITY, FOR ACHIEVING A MORE LEVEL PLAYING FIELD, AND FOR THERE TO BE GREATER OPPORTUNITY FOR PARING THE CONTROL LIST.

4. STRENGTHENING MULTILATERAL CONTROLS OVER PRODUCTS AND TECHNOLOGIES THAT CAN CONTRIBUTE TO SOVIET MILITARY CAPABILITIES. THE ADMINISTRATION BILL WOULD ESTABLISH SPECIFIC GUIDELINES FOR U.S. PARTICIPATION IN COCOM NEGOTIATIONS. SUCH NEGOTIATIONS ARE ADVISABLE BECAUSE UNILATERAL U.S. CONTROLS ARE GENERALLY INEFFECTIVE AND ENFORCEMENT BY ALL COCOM MEMBERS IS ESSENTIAL TO

EFFECTIVE MULTILATERAL CONTROLS.

THE BILL ALSO PROVIDES THAT THE U.S. SHOULD ENCOURAGE COCOM GOVERNMENTS TO REACH AND CARRY OUT AGREEMENTS WITH NON-COCOM COUNTRIES IN RESTRICTING EXPORTS TO CONTROLLED COUNTRIES. ADHERING TO THIS PRINCIPLE WILL BE INCREASINGLY IMPORTANT AS INDIGENOUS CAPABILITIES OF THIRD COUNTRIES ALLOW FOR RAPID DIFFUSION OF GOODS AND TECHNOLOGY OUTSIDE THE COCOM COMMUNITY, AND AS COCOM WORKS TO PARE BACK THE LIST OF CONTROLLED ITEMS.

5. ELIMINATING UNILATERAL CONTROLS IN THOSE AREAS WHERE THERE IS WIDESPREAD FOREIGN AVAILABILITY. THE ADMINISTRATION BILL PROVIDES (1) SPECIFIC DEADLINES FOR FOREIGN AVAILABILITY DETERMINATIONS INVOLVING CONTROLLED COUNTRIES, (2) FOR A GRACE PERIOD TO ALLOW CONSULTATIONS REGARDING DECONTROL, AND (3) FOR A MORE PRECISE DEFINITION OF "FOREIGN AVAILABILITY." IN MAKING SUCH DETERMINATIONS, COMMERCE WILL CONSULT WITH OTHER AGENCIES, BUT THE CONCURRENCE OF THOSE OTHER AGENCIES WILL NOT BE REQUIRED.

THE BILL ALSO PROVIDES THAT WHEN A LICENSABLE PRODUCT IS AVAILABLE TO A FREE WORLD COUNTRY FROM FOREIGN SOURCES WITHOUT RESTRICTION, A LICENSE FOR THIS PRODUCT IS TO BE AUTOMATICALLY GRANTED WITHIN 20 DAYS (WITH A

15-DAY EXTENSION POSSIBLE) UNLESS AN UNACCEPTABLE RISK OF DIVERSION IS DEMONSTRATED.

6. REDUCING THE TIME REQUIRED TO ACQUIRE A LICENSE BY AT LEAST ONE-THIRD, AND IMPLEMENT A FAIR, EQUITABLE, AND TIMELY DISPUTE-RESOLUTION PROCESS. LAST YEAR, WE REDUCED OVERALL LICENSE PROCESSING TIMES FROM 30 DAYS TO 20 DAYS. EXPORT LICENSES FOR OUR MAJOR TRADING PARTNERS (COCOM) ARE PROCESSED IN ABOUT 7 DAYS, WELL BELOW THE STATUTORY REQUIREMENT OF 15 DAYS. WE WILL MEET THE PRESIDENT'S GOAL AND FURTHER REDUCE THE AVERAGE LICENSE PROCESSING TIMES FROM 20 TO 14 DAYS. WE ARE WORKING WITH OTHER AGENCIES TO PROVIDE FOR MORE DISCIPLINED INTERAGENCY COORDINATION AND TO BRING ABOUT AN EXPANSION OF THE ROLE OF THE EXPORT ADMINISTRATION REVIEW BOARD (EARB).

7. FURTHER LIBERALIZING HIGH TECHNOLOGY TRADE WITH THE PEOPLE'S REPUBLIC OF CHINA (PRC). RECOGNIZING THE CONTINUED IMPROVEMENT IN THE RELATIONS BETWEEN THE UNITED STATES AND THE PEOPLE'S REPUBLIC OF CHINA (PRC), AND THE COMMITMENT OF THE PRC TO PROTECT SENSITIVE TECHNOLOGY, WE INTEND TO WORK WITH OUR ALLIES TO LIBERALIZE FURTHER HIGH TECHNOLOGY TRADE WITH THE PRC. AS PART OF THIS, THE ADMINISTRATION BILL WOULD ALLOW FOR EXPORTS TO THE PRC UNDER THE DISTRIBUTION LICENSE.

IN ADDITION, WE WILL REVIEW WITH OUR COCOM ALLIES SPECIFIC WAYS TO RAISE THE LEVEL OF TECHNOLOGY THAT CAN BE EXPORTED TO THE PRC WITHOUT COCOM REVIEW.

IN SUMMARY, THERE ARE FOUR MAJOR EXPORT CONTROL ELEMENTS OF THE PRESIDENT'S COMPETITIVENESS PROGRAM THAT REQUIRE CONGRESSIONAL ACTION: 1) IMPROVE FOREIGN AVAILABILITY, 2) STRENGTHEN ENFORCEMENT, 3) STRENGTHEN COCOM, AND 4) ESTABLISH DISTRIBUTION LICENSE AUTHORITY FOR EXPORTS TO THE PRC. WE URGE YOU TO SUPPORT THESE PROPOSALS AND TAKE PROMPT ACTION ON THEM.

CONSISTENT WITH THESE LEGISLATIVE INITIATIVES, COMMERCE HAS ALREADY MADE CONSIDERABLE STRIDES IN REDUCING UNNECESSARY BURDENS ON U.S. INDUSTRY THROUGH IMPROVEMENTS IN OUR EXPORT CONTROL PROCEDURES. SPECIFICALLY, WE HAVE IN THE PAST YEAR.

- REDUCED LICENSE PROCESSING TIMES BY ONE-THIRD;
- INSTALLED A NEW AUDIO RESPONSE UNIT -- "STELA" (STATUS TRACKING EXPORT LICENSE APPLICATIONS) -- THAT AUTOMATICALLY HANDLES REQUESTS (USING VOICE-GENERATED TECHNOLOGY) FOR STATUS CHECKS ON EXPORT LICENSE APPLICATIONS;
- RAISED THE PROCESSING DATA RATE (PDR) LEVELS OF COMPUTERS ELIGIBLE FOR EXPORT UNDER THE DISTRIBUTION LICENSE PROGRAM. THIS CHANGE WILL ELIMINATE OVER 5,000 INDIVIDUAL LICENSES ANNUALLY;
- REDUCED THE PAPERWORK BURDEN ON THE EXPORT COMMUNITY BY AUTHORIZING A 24-MONTH VALIDITY PERIOD FOR INDIVIDUAL VALIDATED LICENSES;
- EXPANDED OUR EXPORT CONTROL SEMINAR PROGRAM, BOTH HERE AND ABROAD, THROUGH OUR EXPORTER OUTREACH STAFF; AND,
- ESTABLISHED A GENERAL LICENSE TO COCOM COUNTRIES (G-COM) TO AUTHORIZE EXPORTS OF SOME COMMODITIES TO COCOM COUNTRIES WITHOUT AN INDIVIDUAL VALIDATED LICENSE. WE ESTIMATE THAT THE USE OF G-COM ELIMINATED THE NEED FOR PROCESSING OVER 12,000 LICENSE APPLICATIONS IN FISCAL YEAR 1986.

COMMERCE HAS ALSO INITIATED SEVERAL PROPOSALS THAT CUT ACROSS ALL SEVEN OF THE PRESIDENT'S EXPORT CONTROL INITIATIVES. OUR PROPOSALS ARE ALSO INTENDED TO REDUCE UNNECESSARY BURDENS ON U.S. EXPORTERS, STRENGTHEN OUR RELATIONSHIP WITH OUR COCOM ALLIES, AND FURTHER EMPHASIZE OUR COMMITMENT TO PROTECT NATIONAL SECURITY AND TO FURTHER U.S. COMPETITIVENESS.

FIRST, COMMERCE PUBLISHED IN THE FEDERAL REGISTER ON FEBRUARY 20

TWO NEW GENERAL LICENSES WHICH WILL REDUCE THE LICENSING BURDEN ON U.S. EXPORTERS, INASMUCH AS EXPORTERS WILL NO LONGER HAVE TO OBTAIN INDIVIDUAL VALIDATED LICENSES IN THE FOLLOWING CIRCUMSTANCES. THE GENERAL LICENSE COOPERATING GOVERNMENTS (G-CG) PROVIDES FOR VIRTUALLY UNRESTRICTED EXPORT TO GOVERNMENT DEPARTMENTS AND AGENCIES AT THE NATIONAL LEVEL IN COOPERATING COUNTRIES.

INITIALLY, THIS WILL BE RESTRICTED TO COCOM COUNTRIES, WITH OTHER DESTINATIONS BEING ADDED AS THEY DEVELOP AN ADEQUATE EXPORT CONTROL REGIME. THIS REFLECTS OUR CONFIDENCE IN THESE COOPERATING COUNTRIES TO SAFEGUARD U.S. GOODS.

OUR GENERAL LICENSE FOR CERTIFIED END-USERS (G-CEU) REFINES AN EARLIER PROPOSAL THAT ESTABLISHED A CATEGORY OF CERTIFIED END-USER. INITIALLY, COMMERCIAL ENTERPRISES THAT ARE CERTIFIED BY THE COMMERCE DEPARTMENT AS BEING CONTROLLED BY COCOM GOVERNMENTS WILL BE ELIGIBLE TO USE G-CEU. AT A LATER DATE, THIS CERTIFICATION WILL BE EXTENDED TO OTHER ENTERPRISES, INCLUDING PRIVATELY OWNED DEFENSE CONTRACTORS IN COCOM COUNTRIES. WE HOPE TO EXPAND THE LIST OF COOPERATING COUNTRIES AS WELL.

SECOND, WE ARE DEVELOPING A PROPOSAL TO ELIMINATE, OR AT LEAST REDUCE, PRIOR U.S. AUTHORIZATION FOR REEXPORTS INTO COCOM COUNTRIES.

THIRD, WE HAVE STARTED INTERAGENCY DISCUSSIONS TO ACHIEVE THE ELIMINATION OF LICENSING REQUIREMENTS FOR CERTAIN LOW-LEVEL EXPORTS TO OUR NON-COCOM TRADING PARTNERS IN THE FREE WORLD.

FOURTH, WE ARE EXPLORING PROCEDURES THAT, IN MANY CASES, WILL ALLOW FOREIGN MANUFACTURERS TO INCORPORATE U.S.-ORIGIN PARTS AND COMPONENTS WITHOUT HAVING TO OBTAIN REEXPORT AUTHORIZATION FROM THE U.S. GOVERNMENT.

EXPORT ADMINISTRATION POLICY IS CONTINUALLY EVOLVING AND ADAPTING TO COPE WITH THE CHANGING NATURE OF BOTH THE WORLD ECONOMY AND THE THREAT TO OUR NATIONAL SECURITY. THE CHALLENGE FOR US IS TO ENSURE THAT U.S. POLICY KEEPS PACE WITH THESE CHANGES, AND THAT CONSISTENT WITH VITAL U.S. NATIONAL SECURITY AND FOREIGN POLICY INTERESTS OUR EXPORT CONTROL POLICY: (1) DECONTROLS NON--STRATEGIC, NON-CRITICAL GOODS AND TECHNOLOGY; (2) RETAINS FLEXIBILITY TO DEAL WITH CHANGING WORLD SITUATIONS; (3) INCORPORATES NEW GENERATIONS OF TECHNOLOGY WITHOUT IMPEDING LEGITIMATE TRADE; (4) REMAINS A WORKABLE, MULTILATERAL EFFORT; AND (5) DOES NOT PLACE EXCESSIVE HARDSHIP ON U.S. BUSINESS.

IN SUMMARY, THERE IS MUCH TO BE DONE. WHILE WE INTEND TO MOVE FORWARD QUICKLY, OUR ACTIONS WILL BE CAREFULLY MEASURED AS WELL AS TEMPERED TO ENSURE THAT APPROPRIATE STEPS TAKEN DURING THE FIRST YEARS OF THE REAGAN ADMINISTRATION TO SAFEGUARD OUR NATION'S SECURITY ARE NOT ERODED.

Senator **Sarbanes**. Thank you very much, Mr. Secretary.

Senator Proxmire, since you weren't here at the beginning, you have an opening statement, why don't you go ahead and read it?

Senator **Proxmire**. Thank you very much, Mr. Chairman. I very much appreciate that. I have another hearing that I have to chair. I'm supposed to be there at 10 o'clock, so I'll be very brief.

I ask unanimous consent that my full statement be printed in the record.

Senator **Sarbanes**. Without objection, so ordered.

[The opening statement of Senator Proxmire follows:]

OPENING STATEMENT OF SENATOR WILLIAM PROXMIRE

Senator **Proxmire**. Mr. Chairman, I want to commend you for scheduling this hearing and for having such distinguished witnesses come before us to talk about our Nation's export control system. It seems clear that there are some problems in the way that system is operating. I believe these problems stem more from this Administration's unique "management style" which was cited by the Tower Commission, than from any major shortcoming in the legislative framework Congress has established for operating our export control system.

Our national security requires that we have a system to control the export of truly militarily-critical items and technologies. Why? Because the United States and its allies rely on the technological superiority of our weapons to preserve a credible counterforce to the quantitative superiority of the Warsaw Pact. But over the past two decades the Soviet Union has mounted a massive, well-managed, technology acquisition program to acquire militarily-critical Western technologies. This is no figment of our imaginations. The CIA has issued classified and unclassified reports showing the extent of the Soviet program. The National Academy of Sciences panel on export controls, from which we'll hear more later today, states that it "has reviewed a substantial body of evidence—both classified and unclassified—that reveals a large and aggressive Soviet effort to target and acquire Western dual use technology through espionage, diversions, and to a lesser degree legitimate trade." Such efforts have enabled the Soviets to close the gap between their weapons systems and our own. This has an impact on our budget deficit for we in turn have to spend more and more on our own defense programs. Our spiralling budget deficits likewise threaten our national security and trade competitiveness. So let's not fall prey to those arguing that removing export controls on truly critical technologies is the way to improve our trade position. It could actually harm our trade posture by requiring increased spending on defense.

The U.S. business community is not unsympathetic to the need to safeguard critical technologies. The question has always been how to identify them. Just two years ago Congress, after literally years of effort, gave the Administration a framework within which to carry out our control programs. But the Administration has mismanaged that effort. This is due to failures in the White House itself. The NAS Panel states in its report that "the administrative structures established by the executive branch have not proven effective in resolving the frequent policy differences among the three principal line agencies (the Departments of State, Defense, and Commerce). The White House has intervened only intermittently and then primarily to contain interagency conflict rather than to prescribe *adequate policy* direction. The lack of higher-level oversight and direction results in duplication of effort, uncertain lines of authority, serious delays in decision-making, and underutilization of information-sharing capacity."

So we in Congress must be careful not to dismantle a program that really is essential to our national security because of frustration over the way the program is managed or mismanaged.

One more point. In 1983 and 1984 Senator Garn and I believed that the Commerce Department should not manage our export licensing program because of the inherent conflict there between trade promotion and export administration. To lessen that conflict the 1985 Act mandated that Commerce create a new Under Secretary for Export Administration so that function had higher visibility and could command more resources and respect. Commerce has resisted establishing such a position. I for one will not go along wtih any further delays in implementing that Congressional mandate.

Senator **Proxmire**. I'd just like to read two sentences from it:

The National Academy of Science's panel on export controls, from which we'll hear more later today, states that it, and I quote, "has reviewed a substantial body of evidence, both classified and unclassified, that reveals a large and aggressive Soviet effort to target and acquire Western dual use technology through espionage diversions and, to a lesser degree, create legitimate trade."

So I hope we will not fall prey to those arguing that removing export controls on truly critical technologies is the way to improve our trade position.

I'd like to ask you a question Mr. Secretary. In 1983 and 1984, Senator Garn and I believed that the Commerce Department should not manage our export licensing program because of the inherent conflict there between trade promotion and export administration.

To lessen that conflict, the 1985 act mandated that Commerce create a new Under Secretary for Export Administration. So that function would have higher visibility and could command more resources and respect at Commerce.

Commerce has resisted establishing such a position. I, for one, will not go along with any further delays in implementing that congressional mandate.

Is there any way we can expect a decision on this in view of the fact that we acted on it in 1985?

Secretary **Baldrige**. As you know, Senator, I did talk to Senator Garn about some of my reservations. I thought they were very practical and asked him, if we could not at least delay that for a year.

We have set up a team in the Commerce Department, under the aegis of the Deputy Secretary, that is looking at how we can accomplish what you want and their planning will be done by March 31. And we now have the funds to do it.

Senator **Proxmire**. You say it would accomplish what Senator Garn and I want to do. Would we have an Under Secretary for Export Administration?

Secretary **Baldrige**. No, sir. It means that we will have everything in place to do it, if it's the will of the Congress to go ahead and do it.

I still hope, Senator——

Senator **Proxmire**. The 1985 act mandated that, did it not?

Secretary **Baldrige**. Yes, sir. But, Senator Garn, I'm not sure of the legal——

Senator **Proxmire**. Senator Garn can speak for himself. He's a fine Senator. But that's the law. We put it into the law, and it was signed by the President. Passed by the House and Senate.

Secretary **Baldrige**. I had the definite feeling that whatever we've done, was legal, Senator.

Mr. **Freedenberg**. It was put into the law. There was an amendment.

Senator **Proxmire**. Yes, you were supposed to do it this year.

Mr. **Freedenberg**. And, yes, that's what we had to face.

Senator **Proxmire**. You're going to have an under secretary then?

Secretary **Baldrige**. I would still like to come up and talk to you or Senator Garn and see if I can't change your mind. I can't put it any more simply. If I can't, I can't. We'll put it in place.

Senator **Proxmire**. Thank you, sir.

AMENDING THE EXPORT ADMINISTRATION ACT

Now, one bill introduced into the Senate and referred to our committee calls for amending the Export Administration Act to remove the requirement that the President must notify the Congress when he disagrees with the Secretary of Defense as to whether an export license should be issued.

My question is do you support that proposal and, if not, why not?

Secretary **Baldrige**. I'd have to give you an opinion that's strictly my own and not the administration policy, Senator. So, speaking for myself only, I would not agree that the President of the United States should have to report over every settlement of a policy dispute that he makes, whether he overrules the Secretary of Defense or the Secretary of Commerce.

Senator **Proxmire**. I would agree with that. What I'm asking is a specific situation here where you have a Secretary of Defense who disagrees obviously because he feels that this would assist the Soviet Union's defense and make it necessary for us, therefore, to probably spend more money on our defense.

Secretary **Baldrige**. But you put the President in a situation such that if he overrules a Cabinet officer on a particular policy decision the decision has to go to the Senate. I don't think that's wise policy. But that's what the policy is.

I have to support the administration position.

Senator **Proxmire**. One other question. In its proposal, the administration is asking Congress to tell them how to make foreign availability decisions and resolve interagency disputes in other areas that are fully within the President's authority to decide under current law.

Why aren't these policies being implemented by Executive Order or Presidential directive, instead of reopening contentious legislative issues that break no new ground?

Secretary **Baldrige**. There's been enough delays in the past, Senator, not just on these issues but on others that involve foreign availability. It's a contentious subject and we think we can get it straightened out.

We need the legislation. We think that's better. I, myself, do. I think the legislation is very simple. It's clearcut. We still don't have a specific definition of "foreign availability".

That problem has come up often during interagency negotiations. The time it takes has been far too long. We need a time limit on foreign availability determinations and specific definition of what foreign availability is.

It would also help speed up and greatly aid the resolution of the whole problem-solving process.

Senator **Proxmire**. Thank you, sir.

Thank you very, very much, Mr. Chairman. I very much appreciate it.

Senator **Sarbanes**. I think, in the order that members arrived, Senator Dixon.

Senator **Dixon**. Thank you, Mr. Secretary, for coming up here this morning and giving us the benefit of your point of view.

SUPPORT FOR CONCLUSIONS OF NAS STUDY

Do you share the overall conclusions of the NAS study as regards the need to find a better balance between our national security and economic objectives, Mr. Secretary?

Secretary **Baldrige**. Yes, I certainly do. I've always had that feeling. And I think that study made the point very well.

National security is not just military security. National security is economic and military security together. You can't have one without the other.

Senator **Dixon**. I know export controls are far from the most important factor in determining our overall international competitiveness. Nonetheless, would you agree that export controls have been a real problem for the high-tech community and for other major sectors of American industry as well? In that further streamlining, improvement and reform of our control system is in order?

Secretary **Baldrige**. I don't think there's any question about it, Senator. No one inside the U.S. Government and, as far as I know, outside the U.S. Government either in the United States wants to allow strategic material to get inside the hands of the Soviets. That's not the point.

And there's no use in draping ourselves in patriotic colors on that particular issue. Everybody's in agreement on that. The point is how do you get it done most effectively? How do you win on the issue as opposed to just looking good losing on it?

And I think winning in this case means, first, keeping out strategic material, products like these, from the Soviet Union by greater strength of cooperation with our CoCom allies, and, second, an ability to do this job efficiently.

If you do it efficiently, it means you cannot be dealing with a list of outmoded products and technologies. The state of the art has passed by, and we could be spending on the higher end of the list that's the most important instead of wasting time on outdated technology.

So, we need to review the CoCom list. We also need to shorten up on the scope of what we're doing, so that we can include more countries to ally with ourselves and our CoCom partners and get their cooperation on the same kind of high-tech products.

They won't do it if we give them a long list of items that the state-of-the-art has passed by 5 or 10 years ago. That's the position we're in now.

SUFFICIENT RESOURCES TO ENFORCE CONTROLS

Senator DIXON. Do you believe the Commerce Department and the other agencies involved have sufficient resources to enforce controls while not burdening U.S. exporters?

And wouldn't the U.S. licensing and enforcement be enhanced if the magnitude of the licensing burden could be reduced?

Secretary BALDRIGE. Yes, sir, we receive about 120,000 licenses annually now. That's a separate issue. People get it confused sometimes with the CoCom list. We're talking about two separate things now.

Last year we processed 120,000 licenses, some of them distribution licenses.

With what we're proposing here, we would reduce that load by 20 percent.

Senator DIXON. And I believe our own bill that Senator Heinz and I have introduced would reduce it by half, Mr. Secretary.

Secretary BALDRIGE. Maybe you're right. I'd have to look at and go through the whole list.

Senator DIXON. Maybe we can split the difference.

Secretary BALDRIGE. Any reduction we could make that does affect strategic and high technology is clearly going to allow us to spend more time on monitoring the stuff that's really important. I think that's the whole crux of the matter.

Senator DIXON. One last question. There's at least some evidence that the complexity and extent of the United States control system has caused companies in Europe and elsewhere to actually design out American components.

In other words, to design their products in a way that permit them to avoid using American parts in order to avoid our export control system.

Do you see this is a problem? And how serious might it become if we don't do anything about it?

Secretary BALDRIGE. Senator, that statement is absolutely correct. That is happening. It has been happening for at least 3 years, and it's picking up momentum.

There's a broadly spread feeling among companies, particularly in Europe—this is also happening in Asia—that if you can design away from U.S. components, you're designing away from a lot of paperwork, grief and trouble.

So it's hurting U.S. companies directly. We get the reputation of being unreliable suppliers. It's really become a major problem for us, and it's going to get worse unless we do something about it.

Senator **Dixon**. I want to congratulate you, Mr. Secretary, for indicating the cooperativeness on this issue. And we hope in this Congress to do a good deal to help solve that problem.

Thank you very much.

Senator **Sarbanes**. Senator Graham.

Senator **Graham**. Mr. Secretary, I'm interested in exploring the role of legislative change in dealing with this issue. I recognize that there are very delicate judgments that have to be made at the executive level on specific application for export licenses where they represent a national security threat, either militarily or economically.

What are the primary problems, limitations or constraints on effective decisionmaking within the law as it currently exists, to which you believe this committee should direct its principal attention?

FOREIGN AVAILABILITY

Secretary **Baldrige**. Senator, there's lack of specificity on the whole question of foreign availability. There are two main problems. One is when you define foreign availability, you can get into arguments inside the administration as well as with the legislative branch on what constitutes foreign availability. This legislation will provide agreed upon and specific definitions.

The other main problem is the time of the deadline. Currently there is no deadline. So it's possible to argue on and on, and to keep delaying so that no decision is reached. This policy of delay sometimes results into a policy of denial.

As a matter of fact, I think in the last year—how many cases have we found that we have successfully gotten through the administration?

Mr. **Freedenberg**. We have 1 major case and about 4 minor cases. And that's off of a very long list.

Secretary **Baldrige**. I know there's more foreign availability than that. The problem there lies in the process. So, in our legislative proposal, we spell out what foreign availability is and we take that from another statute, so there shouldn't be any dispute. And we say if it is in West-West trade, a license will be granted within 20 days, with a 15-day extension possible—unless there's an unacceptable risk of diversion established.

Now, that will really speed up this whole process. On West-East there would be a 120 day deadline instead of 20 days, and another 60 day extension possible required.

Again, if there was clear foreign availability demonstrated, you would have to demonstrate a risk of diversion in order to stop licensing.

That's the foreign availability part of this. I think also in the legislation. The administration would like to see CoCom negotiating objectives so that our official objectives would be tearing back the

CoCom international control list for the reasons we've gone into before.

That list is now some tens of thousands of products. Seeking a greater commitment of our CoCom allies to pursue cooperation from third countries. The strength there clearly is technical expertise and know-how of scientists and engineers grow disproportionately as a percentage in newly industrialized countries, Pacific Rim countries, South America and all around the world.

We find more and more that the United States and its CoCom allies are not the sole repository of high-technology knowledge, we are no longer the only ones with the ability to make high-technology products.

So it's becoming more and more important for us to get the cooperation of countries that don't have anything to do with CoCom. That should be one of the objectives at CoCom.

I, finally, obviously seeking greater enforcement of CoCom controls by member Governments. In short, getting much stronger on the top end of the list, and don't waste time on the bottom when such effects could be and should be spent with technology at the top of the list.

ABSENCE OF DEADLINE FOR DECISIONMAKING

Senator **Graham**. The question that I have from that analysis is it seems to me that several of those items, such as the absence of a deadline for decisionmaking, should be within the control of the executive.

If the executive wanted to lay down a standard for its affected agencies; that decisions would be made within a timeframe, is that not an allowable judgment within the current law?

Does it require a law change in order to let the administration achieve that objective?

Secretary **Baldrige**. Senator, I'm not sure of all of the legal implications of your question. I do know that the administration decided to go about it this way. I'm not sure if part of it could not have been done without coming to the Congress.

But, usually, when I'm sitting behind this microphone, I'm getting chewed out for doing things that I should have come to the Congress on. So it's refreshing to hear a statement the other way. [Laughter.]

Senator **Graham**. As you know from some of our previous relationships, I come out of a recent executive background. And my premise is that the role of a legislative body ought to be to set general policy and then, within that, to allow the executive to implement on specific cases.

So I'm concerned with the degree to which the problem is a problem of excessive congressional restraint, or a problem of an executive not adequately using the authority which is available to him.

Secretary **Baldrige**. I understand, Senator. I'm just not enough of a legal expert to give a good answer to that. This was the administration position, to seek legislation and flesh it out like I was talking about.

And include also—I forgot to mention—the People's Republic of China part, the authority to issue a distribution license for them.

But I really am not competent to answer the question on how this can be done.

Senator **Graham**. Possibly, with some followup inquiries, we could get analysis of that.

Secretary **Baldrige**. Yes, sir. I'd be glad to give you a position on that.

Senator **Sarbanes**. Senator Gramm.

Senator **Gramm**. Thank you, Mr. Chairman.

Mr. Secretary, let me begin by thanking you for your leadership a couple of weeks ago on the oil field equipment export decision. I thought it was long overdue and I want you to know that I personally appreciate your effort to see that we ended a policy which was initially aimed at punishing the Soviet Union but ended up punishing us.

That was not a national security issue. But it was an issue that I think has some bearing on this hearing. And I want you to know that I appreciate your leadership on that issue.

Secretary **Baldrige**. Thank you, sir.

NATIONAL SECURITY

Senator **Gramm**. I'm really torn on this issue of national security export controls, torn in the sense that it makes no sense for us to limit the ability of American companies to export products embodying technology when products embodying the same technology can be bought from our allies.

On the other hand, as I look at the list of items in the newly published Soviet acquisition of militarily significant Western technologies by the Defense Department, you've got to be stunned by the fact that the Soviets every day, for a few million dollars, are buying technologies that we are literally spending hundreds of millions, and sometimes billions of dollars, to develop.

For example, I'm told through our intelligence gathering that the Soviets acquired two types of machines—one from the Pacific-Rim, one from Europe. And they are today at work in the Soviet Union quieting propellars and in the process driving us faster toward being forced to move away from our current attack submarine to a new attack submarine and, in the process, imposing literally billions of dollars of costs on us.

So it seems to me that two things have got to be done. You've addressed one of them very clearly and sort of bitten around the edges of the other.

When we've got to get beyond the focus of attention on outmoded technologies and get the focus of attention where it's going to do us some good, I want you to know you have my commitment of support for that.

One of the problems in dealing with any bureaucracy is they're always trying to close the barn door on a horse that got out 3 to 4 weeks ago—not on the one that's in the barn and trying to get out.

The second problem I'd like to address my question to, however, is, are we making any progress in getting our allies to institute a system that would be similar for all the Western nations that are generating technologies?

Ultimately, unless we have a partnership on this matter, we're going to end up having business do what Lenin predicted what they would do, and that is sell the Soviet Union the rope that they would use to hang us.

And no matter what we do acting unilaterally, if we are going to see our allies in turn sell the technology embodied in their products, which may or may not have come from us, we're not going to do any good.

Are we making progress in trying to get our allies to work with us in a concerted effort?

Secretary **BALDRIGE**. Yes, sir, we definitely are. We've put a lot of time in on that. Assistant Secretary Paul Freedenberg, who is our expert in that area, has been in the negotiating sessions with our CoCom allies.

With your permission, I'd like to have him give his thoughts on that because he's been on the firing line.

Senator **GRAMM**. That would be good.

Mr. **FREEDENBERG**. With regard to the first point you made, that acquisition, which was very damaging, was clearly illegal and clearly for equipment at the top end of the list. That's not what we're talking about in terms of cutting the list.

There's no question about that.

Senator **GRAMM**. It does address the second point I'm talking about though.

Mr. **FREEDENBERG**. That's right.

Senator **GRAMM**. Which is a partnership with our allies to try to prevent this from happening.

Mr. **FREEDENBERG**. That's what our current negotiations are aimed at. We recognize that, unless you have more enforcement in a Federal licensing system, these sorts of things will happen again.

So we put a very high priority on it. We've actually obtained better cooperation but still not what we'd like to have. We have also, interestingly, obtained better cooperation from neutral countries which were once supplying the Soviets with some of this technology.

So, actually, there's been good progress over the last couple of years. But there's a long way to go. And no one has the level of licensing vigilance that the United States has.

And that's what we're working toward, but that's a high priority and it's getting high level attention at this point, exactly the point you were making.

Senator **GRAMM**. Let me say that I think it would be helpful, as we consider legislation in this area, that if you have any ideas as to how we might through this legislation put pressure on our Western trading partners to join us in an overall effort of the Western alliance to prevent these kind of sales from occurring, so that we're not, in essence, denying jobs to Americans to produce something that the Soviets are going to be able to buy from the French, the Germans, and the Japanese anyway then I am willing to look at such proposals. I personally am willing to tell people back home we'd like to have these jobs, but we can't sell this to the Soviet Union because it imperils national security.

I'm willing to do that. What is tougher is having to tell them, well, this sale imperils national security, but somebody else is going to do it anyway.

So, any suggestions you have to us how we might make that work better, I'd be very interested in.

Thank you, Mr. Chairman.

Senator **Sarbanes**. Senator Heinz.

Senator **Heinz**. Mr. Chairman, thank you.

First, I want to apologize to our witnesses and to you, Mr. Chairman, for not having been with you at the start of the hearing. I was down testifying before the Energy Committee on a subject of some interest to Pennsylvania coal miners, at least those who are still employed.

I might add, it's good to see Secretary Baldrige here, even if he's in partial disguise. And, by the way, your moustache looks mighty good on you, Mac. (Laughter.)

Secretary **Baldrige**. Thank you. I haven't had too many people mistake me for Burt Reynolds yet. [Laughter.]

Senator **Heinz**. You're coming right along.

Finally, it's nice to see a graduate of the committee staff, Paul Freedenberg, back. Paul, keep those cards and letters coming—as long as they're the ones we want.

Mr. Chairman, I have an opening statement I'd like to put in the record in full.

Senator **Sarbanes**. Without objection.

[The opening statement of Senator Heinz follows:]

OPENING STATEMENT BY SENATOR JOHN HEINZ

Senator **Heinz**. Today we will consider proposals to amend the Export Administration Act to significantly reduce the licensing burden on our exporters. Such a reduction has been a key objective of virtually every so-called competitiveness package proposed this year, including the Administration's, and there are good reasons for that. It has become increasingly obvious in the past two years that our control system is forcing us to give away huge chunks of the world market to our competitors while getting very little in enhanced security in the process.

For example, we are faced with the growing unwillingness of European manufacturers to use U.S. parts and components because of the possibility that doing so will subject the end product to U.S. export licensing requirements. As a result, American manufacturers are not only foregoing sales, they are being increasingly "designed out" of European production, as manufacturers there design and engineer their products to use exclusively non-U.S. parts. Such a development has major long term consequences for our international competitiveness. There has been detailed evidence developed on this subject, and I hope our witnesses today and next week will comment on it.

When we rewrote the Export Administration Act in 1985, we tried to strike a balance between our national security needs and our trade policy and export enhancement needs.

I support maintaining that balance. But over the past 18 months it has become evident that our second objective is not being met.

FOREIGN POLICY CONTROLS

WITH ONE EXCEPTION, ON JANUARY 20, 1987, WE EXTENDED FOR ONE YEAR FOREIGN POLICY CONTROLS IMPOSED UNDER THE AUTHORITY OF THE EAA. CONTROLS ON EXPORTS OF NON-STRATEGIC OIL AND GAS EQUIPMENT AND TECHNOLOGY TO THE SOVIET UNION WERE ALLOWED TO EXPIRE.

IN EXTENDING CONTROLS, THE DEPARTMENT TOOK INTO ACCOUNT THE RECOMMENDATIONS OF THE SECRETARY OF STATE AND THE CRITERIA OUTLINED IN THE EAA. THE REPORT I SUBMITTED IN JANUARY COMPLIES WITH ALL LEGISLATIVE REQUIREMENTS FOR EXTENDING FOREIGN POLICY CONTROLS. CONTROLS WITHIN EACH PROGRAM WERE CONSIDERED ON THEIR MERITS AND RENEWED ONLY AFTER IT WAS DETERMINED THAT TO DO SO WAS CONSISTENT WITH STATUTORY CRITERIA. IN AUGUST 1986, THE GENERAL ACCOUNTING OFFICE ISSUED A FAVORABLE REPORT ON OUR ENDEAVORS LAST YEAR TO COMPLY WITH THE LEGISLATION. WE INCORPORATED THEIR SUBSTANTIVE RECOMMENDATIONS THIS YEAR IN EXPANDING OUR DISCUSSION OF ENFORCEMENT AND ALTERNATIVE MEANS.

SEVERAL MODIFICATIONS TO THESE PROGRAMS WERE MADE IN 1986. ON JUNE 5, 1986, CONTROLS ON CERTAIN HELICOPTERS FOR ANTI-TERRORISM CONCERNS WERE EXPANDED TO INCLUDE ALL HELICOPTERS. ALSO AT THAT TIME, CONTROLS ON CERTAIN CHEMICALS TO IRAN AND IRAQ WERE EXPANDED TO INCLUDE SYRIA. THROUGH OUR CONSULTATIONS WITH INDUSTRY, WE CONCLUDED THAT BOTH OF THESE ADJUSTMENTS WOULD HAVE

A MINIMAL IMPACT ON THE EXPORTING COMMUNITY, WHILE THE CONTROLS DID SERVE TO CLOSE POTENTIAL LOOPHOLES IN OUR ANTI-TERRORISM AND CHEMICAL WARFARE CONTROLS.

A MAJOR FOCUS THIS YEAR WAS THE REVIEW OF THE RESTRICTIONS ON EXPORTS OF NON-STRATEGIC OIL AND GAS EQUIPMENT AND TECHNOLOGY TO THE SOVIET UNION. WHEN THESE CONTROLS WERE IMPOSED IN 1979, THEY SERVED THE IMMEDIATE PURPOSE OF EXPRESSING OUR DISPLEASURE OVER SOVIET HUMAN RIGHTS POLICIES. OVER TIME, HOWEVER, THE CONTROLS NO LONGER WERE ASSOCIATED IN THE PUBLIC MIND WITH THIS PURPOSE AND THEIR EFFECTIVENESS WAS UNDERMINED BY WIDESPREAD FOREIGN AVAILABILITY. IN THE END, WE DECIDED THAT IT WAS NO LONGER IN THE NATIONAL INTEREST TO MAINTAIN THE CONTROLS.

AS I HAVE STATED, UNILATERAL CONTROLS ARE GENERALLY INEFFECTIVE UNLESS WE HAVE THE COOPERATION OF OUR ALLIES OR THE UNITED STATES ENJOYS A MONOPOLY OF PRODUCTION WITH RESPECT TO THE COMMODITIES TO BE CONTROLLED. THE LATTER CRITERION IS BECOMING LESS AND LESS THE CASE. MORE THAN 70 PERCENT OF U.S. PRODUCTS ARE IN COMPETITION WITH FOREIGN PRODUCTS IN OUR OWN MARKET.

FROM THE COMMENTS WE RECEIVED FROM INDUSTRY, IT IS CLEAR THAT MANY U.S. OIL AND GAS EQUIPMENT SUPPLIERS ARE PREPARING AGGRESSIVE STRATEGIES TO REGAIN THEIR PLACE IN THE SOVIET MARKET.

THE NUMBER OF ITEMS AFFECTED BY FOREIGN POLICY CONTROLS CONSTI-

TUTE A SMALL FRACTION OF THE TOTAL NUMBER OF COMMODITIES SUBJECT TO NATIONAL SECURITY CONTROLS. BUT THE AMOUNT OF TIME AND RESOURCES DEVOTED TO MAINTAIN CLEAR AND EFFECTIVE FOREIGN POLICY EXPORT CONTROLS HIGHLIGHTS THEIR IMPORTANCE TOWARD ACHIEVING U.S. FOREIGN POLICY OBJECTIVES. WITH THE CHANGES MADE IN 1986, WE ARE ACHIEVING GREATER CLARITY AND EFFICIENCY IN OUR ADMINISTRATION OF FOREIGN POLICY CONTROLS.

THE OIL AND GAS DECISION WAS IMPORTANT TO THE BUSINESS COMMUNITY. EXPORT CONTROLS MUST AND WILL BE BROUGHT INTO BALANCE. WE MUST AND WILL MAKE SURE THAT THE COSTS OF OUR CONTROLS DO NOT EXCEED THEIR INTENDED FOREIGN POLICY AND NATIONAL SECURITY OBJECTIVES. THAT IS WHAT THE EAA STATUTE INTENDS. THAT IS WHAT GOOD GOVERNMENT DEMANDS.

THE OIL AND GAS CONTROLS WERE A FIRST STEP. THE INITIATIVES THAT WE HAVE ANNOUNCED AND THAT I HAVE OUTLINED FOR YOU TODAY CONTINUE THAT BALANCING PROCESS. WE MUST TAKE THESE STEPS TO BRING THIS COUNTRY UP TO ITS FULL COMPETITIVE POTENTIAL, BUT MOST IMPORTANTLY WE MUST DO SO IN ORDER TO CREATE A BALANCED REGIME THAT WILL BEST SAFEGUARD OUR NATIONAL SECURITY.

MR. CHAIRMAN, THAT CONCLUDES MY STATEMENT. I WILL BE GLAD TO RESPOND TO ANY QUESTIONS THAT YOU OR ANY OTHER MEMBER OF THE COMMITTEE MAY HAVE.

And by failing there, we not only aggravate our trade deficit, we weaken the very sectors we depend on for a strong defense. Our high tech companies are already under terrific pressure here from Japan in particular. If they cannot grow through exports, they will not remain viable here to contribute to our defense needs.

Senator Dixon and I have introduced legislation to address these problems. It addresses reexport controls, decontrol of low technology items, foreign availability concepts and procedures, distribution licenses for China, judicial review, and a number of other issues. It also contains amendments to the International Emergency Economic Powers Act to limit the declaration of national emergencies to real threats to our national security or economic interests.

Although some of these issues could be handled administratively, I believe legislation is appropriate for two reasons. First, a clear expression of Congressional intent is always helpful and will reinforce the Administration's commitment to change.

Second, our experience with proposed regulations in the recent past is that they sometimes become victims of inter-agency fratricide before they can be issued in final form. At this point it is better to maintain an attitude of healthy skepticism towards draft regulations. If they are properly implemented before the enactment of legislation, we can change the bill. If not, then we will have fulfilled our responsibility by legislating.

Let me also say that the changes Senator Dixon and I have proposed are by no means an exclusive list. Senator Cranston has introduced a bill which in some respects is similar but in others deviates from ours. In our discussions with exporters and the Administration other problems have come to light—some of the quite recently--and we have not had enough time to analyze them. These hearings should help do that. We are prepared to support additional amendments to the extent there are further problems that need to be addressed. We hope the Committee will follow these hearings with markup in time to report an amendment to the trade legislation now being developed by several committees. Without question, a trade package would be incomplete without provisions on export controls.

Senator HEINZ. I want to start by noting that the administration bill which I've introduced is a very good bill. It is not quite as good as my bill, but there are, frankly, far more similarities than there are differences. And I'm going to, therefore, only talk about some of the differences.

Just because I've singled them out, I wouldn't want anybody to think that the administration has not come a very long way forward with its bill. It has.

RE-EXPORT CONTROLS

One of the provisions where there is a difference, where the administration does not have a provision, that is in the Heinz-Dixon bill, is in prohibiting any re-export controls on shipments from one CoCom country to another CoCom country, with the possibility of exceptions on a case-by-case basis.

My first question is why is there no such provision in the administration bill? What is the problem, if any, that you have with the provision that I've just described in our bill?

Mr. FREEDENBERG. Our regulatory proposals, which were announced on February 9, actually addressed that. One of the proposed regulations would eliminate export controls into CoCom, which would deal exactly with that subject.

Senator HEINZ. So the only difference is you propose to do it by regulation, we would propose to put it in the statute.

Mr. FREEDENBERG. That's right.

Senator HEINZ. Therefore, as a matter of principle, you have no objection to it.

Mr. FREEDENBERG. In essence, that's true.

Secretary BALDRIGE. If I may expand on that a little, the regulations are currently being drafted for publication as final rules by June that will allow foreign countries that have lawfully obtained U.S. controlled commodities to re-export such commodities for a customer in CoCom countries without U.S. Government re-export authorization.

Senator HEINZ. Very well. Now, are there any companies, are there any case histories of companies in CoCom countries that have broken CoCom rules on re-export?

Do we have any egregious problems?

Mr. FREEDENBERG. I don't have a case history to show you today but, clearly, that happens. In fact, that is a problem.

Nevertheless, it's not a major problem and the regulations themselves don't have much effect because 90 percent of our re-export requests come from U.S. subsidiaries who are already under U.S. jurisdiction, and the remaining 10 percent come from the largest of European companies.

The sorts of violations that you asked about come from the smaller companies who don't apply for re-export authorization anyway. So you don't get at them by this extraterritorial reach.

Senator HEINZ. If there were a company like that, a non-U.S. company that shipped extremely sensitive technology to the Soviet bloc, say, having to do with underwater listening capability, or our technology to reduce the sound of our nuclear submarines—to take a somewhat less than hypothetical example—how can we deal with that?

The particular company I have in mind, if my reference is correct, is no tiny, little, small, immature Japanese company.

Mr. FREEDENBERG. Without going into the specifics, each of the countries has very strong laws against it. Some of them use simply administrative sanctions, so fine.

In the 1985 act, we have the possibility of that company losing its right to export into the United States, if its home country does not properly address the violations. That is one sanction if U.S. commerce was involved.

If it were CoCom-controlled technology, we could bring that case to CoCom and try to get the agreement of our allies.

Senator HEINZ. And hit them with our purse.

Mr. FREEDENBERG. It would be an extremely embarrassing situation for them, and it would be one which would force them to take stronger action perhaps.

Senator **Heinz**. Under current law, can we disbar such a company?

Mr. **Freedenberg**. From the United States are we talking about? Yes. The nexus has to be to U.S. technology.

Senator **Heinz**. If it violates CoCom?

Mr. **Freedenberg**. Not under current law. There would have to be some nexus to the United States. United States technology or U.S. product.

Senator **Heinz**. We can't disbar someone if they get a Federal contract and they undermine our national security? That's OK?

Mr. **Freedenberg**. I thought you were talking about the Export Administration Act, specifically.

Senator **Heinz**. Well, I am.

Mr. **Freedenberg**. I do not know of a specific provision that allows for that.

Senator **Heinz**. Let me move along if I may.

Another provision where there's something of a difference between your regulations and our bill relates to re-export controls on foreign products that contain U.S. parts or components.

In your case, if the U.S. content is 20 percent or less, in our case, 35 percent—do you have any problems with the higher percentages? If so, what are they?

Mr. **Freedenberg**. I think the proposed regulation we have has a lower level than yours.

Again, it's a difference in degree rather than in kind.

Senator **Heinz**. If the committee wanted to try and have an intellectually satisfying basis other than just grabbing into a hat and pulling out a number, how could we arrive at such a number? What is the basis for setting something at 20 or 35 or 45? How do we go about doing that intelligently?

Mr. **Freedenberg**. In many ways, it's arbitrary. That's the obvious point.

Senator **Heinz**. If that's the answer, let's go on to the next question.

Mr. **Freedenberg**. There is a final point. When you look at U.S. parts and components, they generally constitute an average of 20 percent or less of the contents of foreign made products.

At any cutoff point, you'd get a different slice of the universe.

Secretary **Baldrige**. That's from experience. It's not scientific and, therefore, it's somewhat arbitrary.

Senator **Heinz**. Let me ask one last brief question because my time has expired. I will have one other question I'd like to have after Senator Chafee, or you, Mr. Chairman, are through. I'd like to have one other, if I may.

PERCENT OF U.S. CONTENT IN FOREIGN MADE PRODUCTS

And it's this question. You say that the average U.S. content where U.S. components are part of a foreign made product is about 20 percent.

That would suggest that about half of the cases will have a U.S. content of over 20 percent, and half will have a U.S. content of under 20 percent if 20 percent is average.

Is that approximately correct?

Mr. **Freedenberg**. I wouldn't want to stand behind that statistical analysis because, basically, that came out of another study we're doing in the semiconductor field, not of this specific regulation.

We don't have good, solid numbers. We could try to get them for you but at this point, we don't have good, solid numbers.

Senator **Heinz**. Let me put it hypothetically. If the 20 percent was an accurate number, then would it probably not be correct that half of the cases that would be involved would be above 20 percent and the other half probably below? That there would be a bell-shaped distribution?

Mr. **Freedenberg**. Probably.

Secretary **Baldrige**. It probably depends on whether you're using averages or medians, Senator.

Senator **Heinz**. I hope we don't get into that today because I've never been able to define to my eighth grade math teacher's satisfaction the difference between a mean and a median and a mode.

Senator **Sarbanes**. I see the time has expired.

Senator Chafee.

Senator **Chafee**. Thank you, Mr. Chairman.

Mr. Secretary, first, it's a delight to see you again. Let me ask you, I take it that the legislation that you have brought before us is cleared by the administration?

In other words, if that were enacted, there wouldn't be any hassle with the Defense Department. Is that so?

Secretary **Baldrige**. Yes, sir. This legislative proposal on the Hill now is fully backed by the administration.

Senator **Chafee**. Therefore, I think there's great merit in proceeding with the administration bill because it just reduces the time and delays that we might have in struggling with the administration if we varied it to a great degree.

I just want to commend you for your efforts on this, and also to say what do you think of the National Academy of Science's report that they gave? Do you think that's accurate?

Secretary **Baldrige**. Yes, sir. I think it's as accurate as any report that can be. I would agree with the conclusions. We've seen enough of the same trends ourselves to know that they're accurately identified. We're seeing more and more companies abroad deliberately asking their suppliers and their own people to design away from U.S. parts because they don't want to go through the hassle of the kinds of controls we put on.

They're doing it in a lot of cases where the technology really has been passed by by the state of the art, and the point that national security is not only military security but it's economic security also has sometimes been lost in this whole effort.

So I agree with the report, the findings of the report.

Senator **Chafee**. There is a grain of hope here. If your legislation passes, do you think we can recoup some of those markets we have lost?

Secretary **Baldrige**. I don't think there is any question about it. I think the longer the market is lost, the more difficult it will be to recoup, obviously. We have noticed this trend for about 2 or 3 years now. If it was allowed to go on, I think it would be very difficult, but right now the United States is still ahead in various areas.

Companies would like to use our technology where it is superior. The problem with designing out of it is the same problem we ran into with unilateral controls on oil and gas to the Soviet Union. We put those controls on our drilling rigs, for example. Nobody else could touch us in cold water drilling rigs, but because the Soviets had to go someplace else. In a relatively short period of time, the Swedes, the Fins, the Canadians developed techniques that equaled or in some cases surpassed ours.

So the ability for us to regain those lost markets is a function of time, and the longer we are away from the market, the more difficult it is. But my feeling right now is that we can recapture a lot of these markets, if we were allowed to license.

Senator CHAFEE. How close does your bill come to what you would really like, if you had your way?

Secretary BALDRIGE. I really think it is an excellent first step. I am pleased with the bill itself. It is attacking the foreign availability problem head on. It makes a specific point of how you define foreign availability and puts specific time limits on it. The dispute mechanism we are working on will be decided not by legislation; but inside the Government, is also a big step forward. It again affects these decisions timeliness.

The other part of the program is really within Commerce's authority to make the rules with consultation from other U.S. agencies. That is what we are doing, and there we are shortening up about 20 percent of this licensing procedure by saying we will go from 120,000 licenses issued each year to 100,000 or less. This should not be the end of any reform, but this is a very good strong first step, and I would like to see the dust settle from this and then see what the next step ought to be.

Senator CHAFEE. If we are all out in this competitiveness battle, and certainly you have been in the forefront of this. You are going to come up here, hopefully, and help us on the Foreign Corrupt Practices changes and other things we've got before us.

But why do we hesitate on the first step. Why don't we take the second step?

Secretary BALDRIGE. Because I'm not sure yet what step ought to be, Senator. I wouldn't want to take my hat off to anyone in the government on wanting to address the major problems of controlling too much. It is hurting us more than it is helping us, and we ought to change it, but at the same time, I am fully with the expressed administration policy and would be urging that everyone help on that. We want to keep strategic and highly technical materials away from the Soviets. We don't want to lose sight of that fact, and our American companies literally don't want to give them that kind of an edge either.

So when I say I'm satisfied with this, I don't know of another step right now that I would take that I would feel confident was right.

Senator CHAFEE. Thank you for what you have done in this legislation. We hope you will keep the heat on us to get this out.

Thank you, Mr. Chairman.

Senator SARBANES. Thank you, Senator Chafee.

SUPPORT FOR ADMINISTRATION POSITION

Mr. Secretary, I want to follow up on the first question that was put to you by Senator Chafee, and that is, the administration's proposals in this area, both the changes you proposed to do by regulation and the legislative proposals. Do they represent a fully developed and supported adminstration position?

Secretary **Baldrige**. The legislative proposals are fully developed and supported and signed off on. That is administration policy and is supported by all departments. As to the Commerce proposed regulatory changes, Commerce has the authority to make the changes even without the concurrence of other agencies. We have an obligation to "consult," and we are in the process and have been for some time of doing that. We have had those proposed actions either out for preliminary regulations or final regulations for some time. That means that every interested department has a chance thereby to comment on that. And we take their views into account in our final decision.

In effect, that is U.S. administration policy, because it is delegated to the Commerce Department. We have the authority to move on that.

In the list of things we are proposing to do, I really don't see any practical points to object on. If you want to take the time, sir, I'll just run through them. They consist of not requiring licenses from other CoCom country governments, if the government itself is buying the controlled goods. That saves a lot of license time. It is reasonable. If they are members of CoCom, and they are subscribing to the same set or principles we are, we are eliminating the need for licenses to companies that those CoCom governments control.

There is a list called the administrative exception list, the AEN list, which lists controlled low technology items. Other CoCom countries right now require a license also, but, by their own national fiat, without checking with CoCom. They can and do export items from the AEN list. We are proposing, in effect, to do the same thing. I don't know how one could object to that, since nobody else is doing it differently.

I think the other important regulatory change concerns re-exports, where we reduce or eliminate prior U.S. authorization for reexports, if they are going to CoCom countries, on the obvious theory that CoCom menbers have agreed to cooperate with us and are following the same set of rules.

And finally, the part that Senator Heinz brought up, on the parts and components, we have proposed that if there is less than 25 percent for CoCom countries—Senator Heinz had 35 percent—and less than 10 percent for Soviet bloc countries, then the item can go without a license. We said that, because that is where we are really getting hit the hardest by what we could call the "de-Americanization" of products that come under this rule. Foreign companies simply don't want to fool around with U.S. parts, if incorporating 10 percent or 18 percent U.S. parts mean that they have got to go through these rigorous licensing procedures. They just won't do it. They'll go someplace else. So it has proved not to be a hindrance to the Soviets, but it certainly has hurt U.S. companies.

Senator **Sarbanes**. Would those goods be exported directly to controlled countries by the United States—we are now talking about re-exporting without prior approval?

Mr. **Freedenberg**. With regard to that, we would relicense each and every one of those products to the manufacturer. We wouldn't relicense them to the manufacturer, they would be under our control, if they were going directly to the Soviets, and in some cases, we would not license them. But if you are talking about CoCom, we are talking about a case in which it would be licensed through CoCom. If you are talking about cooperating governments, which most of these governments are, they have similar type of controls on products going to the Soviet Union. And as I pointed out, they also do not, we found in most cases, apply for re-export license.

So we have the worst of two worlds. We have a situation in which they either design out or don't apply for the re-export license. In the case of de minimis content, we do not delicense it, though. It would be licensed to these companies, as always, and it would be licensed, if it were appropriate, to the Soviet Union.

Senator **Sarbanes**. How is the content judged?

Mr. **Freedenberg**. By value.

Senator **Sarbanes**. By dollar value?

Secretary **Baldrige**. Dollar amount.

Senator **Sarbanes**. So you could conceivably have a very critical component that would come underneath the dollar value figure that could be re-exported without prior approval from a CoCom country to a controlled country; isn't that correct?

Mr. **Freedenberg**. No, not from a CoCom country. They would still need the approval of CoCom in that case.

If we are talking about a very critical product, say, an advanced microprocessor, we would also have the right to put a condition regarding re-export on the original export license. For example, if we had a great problem with, the state-of-the-art microprocessor that we would not want to have sold, we could still control that individually. But in general, U.S. parts and components would not require re-export license, if they were below 10 percent of the value of the product.

Senator **Sarbanes**. A re-export license from where to where?

Mr. **Freedenberg**. From the country abroad, from that company that wants to sell it to whoever it wants to sell it to.

Senator **Sarbanes**. To anyone.

Mr. **Freedenberg**. Anyone. It is a 10 percent de minimis level. I might say that we have currently a de minimis level on foreign policy controls. We do not claim 100 percent need for re-export authorization of U.S. products now. That is just a common sense rule. We can't ask for a product that has. 1 percent U.S. product content to require U.S. re-export authorization, wherever it is going.

Senator **Sarbanes**. Mr. Secretary, I wanted to follow up on the question that was raised by Senator Graham.

NEED FOR LEGISLATIVE PROPOSALS

Is it your position that you need these legislative proposals because you lack, under current law, the authority to take these steps?

Secretary **Baldrige**. Well, I am afraid I would have to give the same answer I did to the Senator. I am not enough of a legal expert to know how much of this legislative proposal could have been done by Executive fiat and how much is required by a legislative fiat. As I said, it is a somewhat unusual position. Usually, I am being taken to task the other way for doing things by executive fiat.

Senator **Sarbanes**. We may be laying the base for that in the future. In other words, by requesting it, if you are conceding that you lack the legislative authority, in effect, are you taking the view that you are precluded from doing any of these things, unless you get some legislative authority? For instance, if you don't get it, you wouldn't be able to do any of these things, by your own admission, I take it.

Secretary **Baldrige**. I am not enough of a lawyer to know, but I would be glad to get you an opinion from our attorneys on that.

Senator **Sarbanes**. That might be helpful.

Let me just ask whether bouncing some of these issues to the Congress is a way of settling down disputes within the administration as to what ought to be done.

Secretary **Baldrige**. No, because we had to get this done as any legislation signed off by OMB and NSC, in this case. And with those sign-offs, let's say we didn't come down with legislation, it could be done by executive fiat. Those sign-offs are already in place. OMB and NSC both approved this.

Senator **Sarbanes**. And DOD?

Secretary **Baldrige**. DOD is part of the U.S. administation, and DOD did approve the legislative package. We talked to DOD, and Secretary Weinberger gave his concurrency.

JAPAN-IRAN ISSUE

Senator **Sarbanes**. I am going to yield to Senator Graham in just a second, but just to underscore, this is an issue of current concern. I note two articles in the paper this morning, one that has you seeking to block a sale to Japan concerning computers and another one, where apparently you and the Secretary of Defense are in sharp dispute over an export license for the sale of computers to Iran.

Is that correct?

Secretary **Baldrige**. Well, we're batting 50-50 today, anyway. The Secretary of Defense agrees with me on the Japanese buyout issue. The other issue, as usual, is complicated. We are talking about sending computers to Iran. That is a foreign policy decision. In short, the foreign policy of the United States does not prohibit that shipment, and there is no reason to stop it. Foreign policy is a State Department responsibility. We only need Defense's concurrence a national security issue, this is not a national security issue. This is a foreign policy issue—they should, in effect, check with or try and change the policy through the State Department who has the responsibility. Our responsibility in this case, Senator, is to license the shipments, depending on what our overall policy is.

In the case of these computers, besides the fact that there is no foreign policy controls against sending them, the most powerful one of the shipment is valued somewhat over $2 million and is roughly equivalent to an IBM personal computer AT model. Without getting too technical, that has a PDR process data rate of around 30. The technology is 8 to 10 years old. The processing data rate is small. It is not a high technology item. They are going to be used in newspapers, one of them, and I guess the rest on the power grid, not for military purposes. I think there is some opinion, as I read some of the Defense testimony, that if a computer goes to a newspaper, that is a military type sale, because a newspaper can be used to promote public opinion for whatever war they want to fight. But we really haven't used that as a criterion before, and I don't think it is appropriate now. But at any rate, that's not our responsibility.

Our responsibility is, if there is no foreign policy control, it falls within the guidelines. We have no reason not to send it, unless we want to call the whole U.S. Government together and change foreign policy.

Senator SARBANES. I think that one of your arguments is that there are other countries that would sell these items anyway. Is that correct?

And, earlier, Senator Gramm of Texas was questioning you and you made a similar point.

Secretary BALDRIGE. We run into this all the time. The computers that all the publicity is about, they're all 16 bit minicomputers with a PDR rate of around 30. The architecture is more than 10 years old.

Senator SARBANES. I want to move away from this specific item to the general point.

Secretary BALDRIGE. Of where else can they be made?

Senator SARBANES. That from other countries, I take it, generally, you'd be influenced to some extent by whether other countries can make the sale.

Is that correct?

Secretary BALDRIGE. Yes, sir. There are at least 5 big manufacturers of large computers that produce equipment, general purpose computers. All are easily available to nonproscribed countries, including Iran.

So Iran could buy this ICL System 72 that's manufactured by International Computers.

Senator SARBANES. Do you use the same argument generally to influence your thinking with respect to exports more broadly? I take it you do. That's a factor.

Secretary BALDRIGE. Yes. If I may just finish up on that point. Bull, which is a large company in France, also makes that kind of computer.

Fujitsu does in Japan. Norsk Data does in Norway. And Siemens does in Germany. And that's where Iran can get them. They can get them there tomorrow morning.

Senator SARBANES. The same situation prevails, I take it, with respect to other ranges of exports. Is that correct?

Secretary **Baldrige**. Yes. If there's ready foreign availability and we go to the countries on serious cases and say; "Look, we know you make this. We want to withhold it. Won't you cooperate with us?"

We try that, too. But if they're not going to cooperate, unless it's a case like South Africa or some areas where it's symbolic. We see no reason to put U.S. producers at a disadvantage because it can come back to hurt us, and that means lost sales, which means lost research and development money, which means our competitors are gaining experience, technical know-how and the ability to beat us technically if we put ourselves at that kind of disadvantage.

Senator **Sarbanes**. I'm going to yield in just a second.

Would you agree though that unless the United States exercises leadership in restraining some of the transfer of technology, and I'm willing now to discuss the higher levels at which you will focus, there will be no restraint?

If other countries were free of the U.S. pressure—and I'm talking about other countries allied with us—if they were free of that, there would be virtually no restraint on the transfer of technology and the security objectives would be gone.

Secretary **Baldrige**. I would agree with that 100 percent. I've seen it happen time and again. Countries, particularly in Europe, live much more by exports than we do. It's part of their life. They've been shipping to the Soviet Union, for example, for many, many years.

For example, Germany depends on exports for 35 percent of its GNP. That's how large a factor it is for them.

They have leanings or feelings—not necessarily political—but they have a feeling that for example, that they are closer to East Germany than they are to other Soviet bloc countries.

There are all kinds of reasons why the Europeans, absent our leadership on this, would ship distinctly higher levels of technology to the Soviet Union. And it's been the U.S. leadership in this area that has gotten us as far as we have. I wouldn't want to see that change.

In this Iran case, this level of computer simply isn't that high. We could ship that to the Soviet Union directly almost if we wanted to.

Senator **Sarbanes**. Senator Graham.

Senator **Graham**. Mr. Secretary, to pursue the line of questioning of the Chairman, you've described a circumstance within our own administration where the difficulty of arriving at a demarcation between appropriate commerce and national security.

HELPFUL LEGISLATION

How would you see legislation that might be helpful in moving those judgments into the even more difficult area where we are seeking a collaborative judgment from our allies?

How could the legislation you propose make more readily available common judgments among the European and Japanese allies?

Secretary **Baldrige**. Your question is about our allies and not about inside the U.S. Government.

Senator **Graham**. To use an example, how difficult it is when we're dealing with ourselves.

Secretary **Baldrige**. If it was inside the U.S. Government in this or any administration, we should skin our own cats. But on getting our allies to go along, I think it's very important to understand this political reality that CoCom is a voluntary organization, that the United States is one of its strongest leaders.

We're pushing perhaps more than most members, although some members agree with us very definitely and are most cooperative.

But it is that. It's a cooperative group of allies and, as such, because of their national pride, they definitely do not take kindly to any attempt at ordering them about by the United States.

So we have seen time and time again that, if we want to raise the level of technology that can't be transferred to the bloc, our approach to getting cooperation of our allies had best be done by using the kinds of techniques that I would apply when talking among equals, such as cooperation, as opposed to using a club because that is going to hurt more than it helps on a voluntary body.

You get a lot further with cooperation. I'm not so sure the same is true abroad. I don't want to get into other countries outside of Europe by name, but I think there are developing and developed countries in Asia, for example, and perhaps in South America who find it difficult to see any reason for them not to ship high technology to the Soviet bloc if they can make a dollar in so doing.

I think there perhaps a stronger position would be worthwhile. These are all subjective answers to your questions, you understand. It's hard to be objective about an analysis.

Senator **Sarbanes**. Could I just ask are those questions that are going about getting that technology from CoCom country members? Or are they developing it themselves?

Secretary **Baldrige**. There's some of both, Senator. You know, it's a startling fact that over 90 percent of all the scientists and engineers who have ever lived in the history of this world are alive today.

That's how the explosion of scientific and technical knowledge has taken place. We don't have a grip on most of the engineers and scientists in the world; they're all over. And as in developing countries, it's already happened in the Pacific rim, it's going to happen more and more in India, as they learn to take present, rather simple technology that may not be on the CoCom list, but it's approaching high technology—as they learn how to do that better, in a very few years, they will be able to design their own kinds of machinery—computers and so forth—and they're able to make the technical progress that would have been unthinkable 5 or 10 years ago.

We're living through that right now. Five years from now, it's going to be even more difficult. And I see no way to stop it. I see the biggest safety for the United States is to have enough freedom so that we keep ahead in technology continually. That's our biggest single safeguard because a change in technology used to occur every 10 to 12 years. Then it got narrowed down to 5 or 6. Now it's 2 years or less.

In a lot of high technology, the state-of-the-art passes it by in 18 months, when it used to take 5 to 10 years. That means that these countries are going to have their own scientists and engineers working on this. They're going to make some progress, that we're not going to make things move so fast.

And we've got to figure out a way to get them into the same amount of cooperative effort.

Senator **Sarbanes**. Senator Chafee.

Senator **Chafee**. Thank you, Mr. Chairman. I just want to say that I think the point, Mr. Secretary, that you've made, not only do we lose the business but the other country, or the other country's companies are competitive that gets the business, gets not only the business and the immediate job, but they get the R&D and the development.

And I suspect—maybe you could tell me better on this—that Kumatsu's great growth stems from our backing out of that pipeline deal with the Soviets.

Caterpillar had the equipment and Kumatsu moved in. And I think that probably contributed to the great resurgence—not resurgence—growth of Kumatsu as a competitor to Caterpillar.

Secretary **Baldrige**. I don't think there's any question about it.

Senator **Chafee**. So it's not just the loss of the business, it goes way beyond that.

Thank you, Mr. Secretary.

Thank you, Mr. Chairman.

Senator **Sarbanes**. Senator Heinz.

Senator **Heinz**. Thank you, Mr. Chairman.

I think Senator Chafee's point that he just made is a very important one and, indeed, I think it answers a question Senator Chafee asked earlier, which I would answer perhaps slightly differently than the Secretary did.

Senator Chafee asked you—and also Senator Sarbanes as well—why do you need legislation?

I'm like you. I'm not a lawyer. And I don't know whether you absolutely, positively have to have it or not. But I do know this. If you look at the history of export controls, it is a wayward convoluted history and the example of the Yamal pipeline sanctions which were ineffective and which, as Senator Chafee I think accurately described, put our equipment manufacturers just about out of the international business and enriched Kumatsu and the Japanese, is a very well-taken case in point.

I suppose we can write laws around here—we do—and we have—giving the executive branch carte blanche to do whatever they want. Sometimes, that's a good idea. But, sometimes, as I think we've learned with respect to the Yamal pipeline, it isn't.

So there is a very strong argument for us helping the executive branch build consistency into the law so we are perceived as a consistent source of supply to others abroad.

Too often, we are not perceived that way at all and I know the Secretary knows this. I just wanted to really go on record in that regard, and I suspect he probably shares that feeling.

WEST-WEST TECHNOLOGY DECONTROL

Let me just ask this, Mr. Secretary. Do you support or do your regulations provide for West-West technology decontrol, at least to the AEN level?

Secretary **Baldrige**. If I understand correctly, do we permit West-West technology?

Senator **Heinz**. In your regulations, do you envisage removing controls on exports to the Free world—I describe that as West-West—to at least the AEN level?

Secretary **Baldrige**. Yes, my expert tells me. The answer is yes.

Senator **Heinz**. That's a good start. Both a good answer and a good start.

How many individual validated licenses did we issue, roughly, to nearest 10,000, in the last year for this purpose?

Mr. **Freedenberg**. It's hard to break it out because we don't have an AEN in the computer.

Senator **Heinz**. Excuse me. Let me rephrase my question. Whether they were for AEN or above, how many individual validated licenses did we issue for the Free world?

Mr. **Freedenberg**. For the Free world, it's about 120,000. And another 4,000-5,000 for the Bloc and the PRC; mainly, the PRC.

Senator **Heinz**. But, to the Free world, about 120,000. What was it 2 years ago?

Mr. **Freedenberg**. Around 140,000, as I remember, 130,000. I don't have the figure right with me. But part of the difference is the removal of G-Com. That is, of the AEN level to CoCom.

Senator **Heinz**. If we do what you propose to do, which is to decontrol up to AEN, and we're now, under current policy, with 120,000 individual validated licenses a year, what would you imagine it would be that you would have to approve under the revisions that you say you plan to make by moving up to AEN?

Secretary **Baldrige**. Ten percent.

Senator **Heinz**. By my information, it takes it down to about 100,000. It goes from roughly 120,000 to 100,000. You say it could be a little less than that.

Mr. **Freedenberg**. It's not decontrol. It's removing the licensing requirements of these products for the Free world. It will still be controlled to the Communist world.

Senator **Heinz**. I quite understand. It is to remove controls on exports to the Free world.

Now, were we to remove controls on Free world exports to the level of the PRC green line, instead of issuing 120,000 individual validated licenses, how many would we issue?

That is, while both a relatively low level of technology, at least as I would consider it, the PRC line would permit a larger number of items to be exported without controls to Free world countries.

Mr. **Freedenberg**. That's right, because you basically triple the speed of the computer. I think my staff did that for your staff, but I don't have that figure right in front of me.

Senator **Heinz**. Let me tell you what your staff told my staff, which was 60,000. In other words, instead of making it a 10-percent improvement, we would cut the number of individual validated licenses in half. A very big improvement indeed.

PRC VERSUS FREE WORLD PRIVILEGES

I've got an obvious question. We have a liberal policy for the Communist People's Republic of China, which opposes everything we do internationally except the hard line we take on the Soviet Union, which they also echo. They are against administration policy in Latin America and in Nicaragua, but they do like our technology—I'll give them credit for that. Why should we not allow non-Communist, free world countries the same privileges as we grant a Communist People's Republic of China?

Secretary **Baldrige**. Well, Senator, I really don't have a long answer for you. The PRC we have looked on as a separate case, a separate stage of development, and so forth.

I recognize your point. I'd feel a lot better if I could talk to our technical experts on that, and give you an answer later, because we always have handled the PRC as an individual case, taking into account their own development needs and taking also into account not just the fact that they're Communist but there are geopolitical imports, and so forth.

Senator **Heinz**. Let me see if I understand.

Secretary **Baldrige**. It's not the time for a glib answer.

Senator **Heinz**. I agree. I prefer that you not give a glib answer, and I prefer that you do that just that way. But let me just develop my point, if the Chairman will permit me, for another 60 seconds, to make sure that I understand where we are.

Where we are is that we control shipments of technology to such Western countries as Sweden, Switzerland, Brazil, Singapore, Korea, Taiwan, Mexico, Norway, Greece—about twice as stringently, as measured by the number of individual validated licenses as we do to the People's Republic of China.

Is that more or less right?

Secretary **Baldrige**. Yes, Senator. But I think the major point that we haven't discussed and that I think is probably the most important one on this issue is taking, the PRC and those countries and comparing them. The risk of diversion to the Soviet bloc is greater from most of those countries than it is from the PRC.

Some of them may have changed, that you mentioned. The risk of diversion to the Soviet bloc from the PRC is significantly less.

Senator **Heinz**. Senator Sarbanes and I had the privilege of visiting the PRC. We went up this last May-June to Baotou, Inner Mongolia. I took the occasion to ask the local officials up in Baotou how relations were with their neighbors to the north, which is immediately Outer Mongolia, essentially a Soviet satellite.

In Beijing we were told time after time that things have never been worse. You know, relations with the Soviet Union were awful. The obstacles to improve relations were greater than ever before.

In Baotou, it turned out things had never been better with the Soviet Union. Apparently, there's a lot of trade and commerce and they get along just fine.

So I hear what you're saying. I'm not trying to push you into a position, but just to put it in perspective one other way, I don't know the answer to this question.

Do we control our exports to Israel more than we do our exports to China?

Are they not subject to a stricter level of control—individual validated license control—than the People's Republic of China?

Mr. **Freedenberg**. I lost you earlier. I usually can follow you very well, since I worked for you for 6 years. But I don't know what you mean by controlling.

We do license these products to China. They have to have a valid end use. We aren't giving them away to anybody who wants them.

So we do control them. It's a green line. There's general presumption of approval at a certain level, but we still decide what the end uses are allowed. And, in fact, my enforcement people are going to try to doublecheck to make sure that our end use is a good system and we might want to improve it.

So we're not exactly giving this technology away.

Senator **Heinz**. And we're selling it at a high price, too. But what I meant was, with the chairman's forbearance, is the terms of the presumption of approval.

Do we not have a threshold, that is to say, the PRC green line, a threshold of approval for China that is higher than the official threshold of approval for Israel?

Mr. **Freedenberg**. I don't think that's a good comparison.

APPROVAL OF LICENSES FOR ISRAEL

Senator **Heinz**. What threshold of approval do we use for Israel? Israel is not a part of CoCom.

Mr. **Freedenberg**. Israel is not a part of CoCom. With Israel we have particular problems by law because of nuclear nonproliferation concerns and that's just the law. We have no alternative on that. It's not a political decision.

But we still approve most of the licenses to Israel as we do approve most of the licenses to the PRC. If you're talking about cutting out the AEN, we would have more difficulty with Israel because they are not a signer of the Nuclear Nonproliferation Treaty—not because we're not close allies.

We have legal obligations under our nonproliferation concerns. That's why we have interagency groups to review licenses to Israel. It's not a political decision, however, and we do license these products.

And we get the sense that we're not licensing these products or looking at the end use. We have a very good system that's keyed into overall worldwide intelligence and our best end use research.

So we are still in a very rigorous licensing system. What we're trying to do is to decontrol the low-tech so we can concentrate more on the high-tech. So we can use our resources wisely.

Senator **Heinz**. That's why I hope that the Secretary will look very carefully at this question, so that we can make a prudent determination on whether AEN and below is the right cutoff level, or whether it should be something higher at the PRC green line.

Thank you very much, Mr. Chairman.

Senator **Sarbanes**. Mr. Secretary, just let me comment on this issue. I think the response you gave to Senator Heinz was indeed a very thoughtful one. The whole rationale for these restraints is not that of technology moved to the controlled countries.

Now you may have the paradox as it appears perhaps of having a more lenient threshold for the PRC than you have for some other country. But as you responded, the basis of that is a calculation that they're less likely to make the transfer.

Now, if that is factually correct, then it's consistent with the rationale of the entire restraint procedure. Now, you can argue whether it's factually correct.

But, if in fact it's factually correct, then it in effect falls into place in trying to implement the policy.

We may have a country with which we have longstanding relations and be very close and an ally. But they may have an economic policy that in effect says we want no restraints on this transfer. And anything we get, we're going to sell anywhere we want or anywhere we can find a sale.

That runs directly counter to what this restraint policy is supposed to achieve.

Secretary **BALDRIGE**. Exactly.

Senator **SARBANES**. We thank you very much. It's been very good testimony. You've been very helpful. This is obviously a matter which the committee will be addressing in the coming weeks. We'll probably be back in touch with the Department and seeking your expert counsel.

Secretary **BALDRIGE**. Thank you, Mr. Chairman.

Senator **SARBANES**. Thank you, Mr. Secretary.

Mr. Freedenberg, nice to have you back.

We'll now go to the panel, which will be addressing the report of the National Academy of Science on National Security Export Controls.

We're very pleased to have the panel. General Allen, director of the Jet Propulsion Laboratory, who is chairman of the National Academy of Science's panel; and Professor Cooper, from Harvard University; and an old and dear friend of mine, a Mr. McLucas, the CEO of QuestTech Corp. And I gather you are accompanied by Mr. Wallenstein, who is the executive director of the panel study.

We're very pleased to have you here. Why don't you go ahead and proceed?

LEW ALLEN, JR., DIRECTOR, JET PROPULSION LABORATORY, CHAIRMAN, NATIONAL ACADEMY OF SCIENCES PANEL ON NATIONAL SECURITY EXPORT CONTROLS, PASADENA, CA

Mr. **ALLEN**. Fine. We are pleased to be here to discuss with you this report which we have prepared. I believe we have already submitted to you the executive summary, and of course the more complete volume of the report is also available to you.

You've already introduced the 2 panel members who are with me. Let me say again that they are Richard M. Cooper, who is the professor of international economics at Harvard University and was the Under Secretary of State for Economic Affairs from 1977 to 1981; and John M. McLucas, who is at the moment the president and chairman of QuestTech Corp., and of course was Secretary of the Air Force from 1972–1975 and the Administrator of the Federal Aviation Administration from 1975 to 1977.

And you also mentioned Dr. Mitchel B. Wallenstein, who was the director of the study for the Academy under the Academy staff.

I have submitted, Mr. Chairman, a written opening statement. But, recognizing that your time is short, I will just go through and highlight it a little bit and just have the written statement for your record.

Senator **Sarbanes**. Fine. We'll include the full statement as submitted.

Mr. **Allen**. And I'll just try to make some of the key points that I think are perhaps useful that have come from our study.

TECHNOLOGY AND NATIONAL SECURITY

The first of these is that advanced technology is very important to Western national security. As the United States and its allies are in general outnumbered by the military personnel and arms and outgunned in military equipment on the line by the Soviet Union, we have sought to compensate for that by having technological superiority of our forces, wherever that's possible.

In the West and in recent times, many of the technologies that are important in maintaining that technological advantage stem from the commercial sector.

They're of course called dual use technologies. Electronics and computers are a classic example of that. And they are increasingly important to Western military security. The Packard Commission report recently pointed out that the Defense Department should use even more of these commercially derived products in military systems for economy and producibility reasons.

Now, in the West, and in particular in the United States, the vigor of university research and research that's driven by commercial use of high technology give us a great advantage.

The Soviets don't have that same advantage. They lack a strong commercial sector. They seek to offset that in a lot of ways, but the one of course that is of interest today is that they do have a systematic and centrally directed effort to acquire and apply Western technology.

Now, the conclusion that we reached from those points is that controls are necessary to impede the transfer from the West to the East of militarily important dual use technologies.

And the purpose of our recommendations is to make those controls more effective. The United States, however, is not as dominant as it once was in many of these dual use technologies.

Many of the Western industrialized countries, and particularly Japan as an example, have products and manufacturing technologies that are either equal to ours or exceed them.

Therefore, our control system cannot be static. It has to be dynamic because of the pace of the development of technology.

But, most important, it can't be unilateral. It simply must be multinational because it doesn't do much good for us to control our technology from Soviet acquisition if equal technology is available elsewhere.

CoCom is of course the mechanism for implementing the multilateral control system among the Western allies. In this area, which is the national security aspect of export controls, that portion of the law is narrow in that it deals with the transfer of militarily important technologies, dual use technologies to the Soviet bloc.

It is the narrowness of that that permits the Western allies to join together in a rather effective arrangement, informal though it is, which is CoCom, in order to control exports.

So we have focused on how to make that system more effective in impeding unwanted transfer of high technology dual use items to the Soviet Union and its allies.

But we have to ask whether those controls will have an unintended effect on West-West trade, and also on the relations which are so important to maintain with our friends and allies in the Free world.

In the present administration in the last 6 years, there has been considerable focus on strengthening that system. And it has in many cases had a very positive effect in doing this.

COMPETITIVENESS

But we believe that, in some cases, the actions over the last 6 years have overshot the mark. The current system of controls does impede West-West trade and it selectively impedes U.S. trade with our Western trading partners.

The competitive playing field is not level. The amount of trade which is involved here is not insignificant. We estimate that, in 1985, about 40 percent of all U.S. exports of manufactures, that is, about $62 billion, was subject to prior Government review and approval for national security purposes.

And that's larger than it has been in the past. United States controls are different from those of our CoCom allies and that places the United States exporter at a competitive disadvantage.

In the United States there are time delays and uncertainties associated with the licensing process which are greater than the other CoCom countries.

They focus on rapid processing, often prior consultation between exporters and licensing officials, and their system is in general predictable.

In the national security area, the United States unilaterally controls some 27 categories of dual use products and technologies that are not on the CoCom international list. And the United States alone often requires foreign resalers to obtain a United States reexport authorization for United States origin end products even when they're incorporated in foreign equipment.

It is clear that these features are discouraging the use by other Western countries of U.S. manufactured equipment and components. We believe there is a conscious effort underway sometimes known as de-Americanization, to design around or find alternatives to the use of U.S. goods. And actually, since our report was released, some of those have been documented publicly.

It seems clear to me that when that occurs for a European-produced product that the U.S. export control system is not achieving its objectives, it is denying a U.S. component to go into a European system, presumably on the basis that the distribution of that European system will be different than we would have allowed under our system, but when a basically equivalent product goes in it, we have only served to deny the U.S. manufacturer the sale and not changed the availability of that to the Soviet Union.

It seems clear to us that the complexity of the control system that we have discourages the small high-technology business to emphasize exports. It is sufficiently daunting that a new company, an emerging company, when examining the business choices necessary to decide how much to emphasize foreign sales is prejudiced against making it a major business.

The dollar cost to U.S. business is significant. We have attempted through a commissioned study to estimate what that cost is, and it is difficult and controversial as to whether our numbers are correct, and our conclusion isn't based on those numbers, but the unilateral features of U.S. control, that is, the differences between our system and that of our allies is damaging our competitiveness in the area of our greatest strength—high technology—where we are now, for the first time, running a trade deficit.

These differences tend to irritate our allies and are confusing to those who have to operate within them. We visited overseas to discuss this issue in a number of countries, and there were several conclusions that came from our visits. The first one is that with almost all of the people that we talked to there was rather surprisingly strong support for the intent of U.S. policy. That is, they agree with the idea that the United States must take the lead in impeding the flow of militarily significant produced technology to the Soviet Union, and they accept the fact that we must have effective controls, but they regard the policy, as we presently administer it, as being excessive, not as effective as it should be and intrusive in their affairs.

That, of course, is because of the extraterritorial features. We tried to assess how the executive branch has been dealing with these matters, and we concluded that the policy process has been in some disarray. The Department of Defense has aggressively taken the initiative, in accordance with Presidential directions to invigorate the system. It exercises a de facto veto over proposals of the Department of Commerce, but that is the agency which actually, under law, is assigned the principal authority, but Commerce, at the beginning of the administration, was weak and ineffective. They are improving, but there still are questions about the modernization and effectiveness of Commerce's actions.

The Department of State has allowed the. U.S. Government to be speaking with several voices in this matter, and the overarching mechanism, that is, the National Security Council and the mechanisms that exist to develop the policy and resolve these interagency disputes, have not exercised the leadership that they should have exercised in recent years.

In effect, Defense took this charge from the president to invigorate the system and has done so. In the process, it has just been better than the other agencies of Government in its personnel, its financial resources and in its bureaucratic skills. As a result, the other agencies of Government have not improved as they should have, and it has led to confusion.

CONTROLS NEEDED

What we tried to say really is this. Controls are needed, but they have to be multinational to be effective. We can and should lead, but the United States, by itself, can control only a few items. Supercomputers are perhaps an example. And everything else has to be controlled through a community of common controls on dual use technology, that involves at the very least the first tier countries of CoCom, but better, those common controls should involve all of CoCom and as many of the other advanced countries, the newly industrialized countries as one can bring aboard, either through a formal arrangement or informal.

To have that happen, we think it is necessary that the United States should move to control only CoCom prescribed items. We need to have that happen. It is going to be necessary to reduce the number of items that the U.S. restricts, in order to get focus and agreement on the most critical items that deserve effective protection.

On the third country issue we have to work it hard. It is difficult. The Government has been trying to do it. It is clearly not satisfactory to stop with an agreement that covers only U.S.-manufactured products. That only hurts U.S. exports. As we work with our CoCom allies and others, we believe that it should be possible to abandon the unilateral and extraterritorial features of current U.S. policy. Indeed, we think that, as a not-too-distant goal, we should have the elimination of all national export controls within the community, within CoCom.

We emphasize in the report that it is also important that the United States continue to encourage vigorous technology advance in our country and, indeed, among our allies as well. Economic vitality, economic strength in the high technology commercial sector in particular, is an important aspect of national security.

We made some other points in our report. We think that the way Government has organized itself most recently has diminished the importance of technical judgment in the process. The departments of Government have tended to assign the responsibility for export controls to agencies within their departments which are concerned only with security losses. In doing that, they have diminished the weight and effect of technical and other considerations. We think that balance needs to shift back.

We think the Department of Commerce should be put back in the leadership role on export control matters, and to do so, they've got to improve their own capabilities.

We think that the Government, through Commerce, but also at higher levels, such as the National Security Council, should advocate trade as part of a broad conception of U.S. national security. There really is not, as we can see it, an adequate mechanism for trade advocacy in addressing many of these issues within the Government. And we make the point, in the same vein, that the administration needs to listen to business. It's got some mechanisms for doing that that have not been used efficiently.

This administration has accomplished needed improvements in the administration of national security export controls by both the United States and through the invigoration of CoCom by its allies.

But our performance as a government has not been very satisfactory. If we don't change it, it will be less so, because of the trends of technological diffusion in international trade and because of the pace of technological development. And the mechanisms seem to be in place, but the control mechanism has not had the direction and the leadership at the highest level that it needs to balance the concerns that really exist.

Mr. Chairman, we think that the Export Administration Act, as it was amended, provides an adequate authority for achieving the objectives that we've stated, and most of the changes we have envisioned could be accomplished by administrative action, but we recognize the importance of congressional support in this initiative, and we are also aware that members of this committee are going to introduce legislation, as is the administration, that draws on our findings and seeks changes in the Export Administration Act. Therefore, we would be happy to answer any questions about the report that can assist you with these kinds of proposals.

With your permission, I would like to ask Dr. Cooper and Dr. McLucas, if they would like to make any remarks.

Senator **Sarbanes**. Certainly. Dr. Cooper?

RICHARD COOPER, HARVARD UNIVERSITY, MEMBER, NATIONAL ACADEMY OF SCIENCES PANEL ON NATIONAL SECURITY EXPORT CONTROLS, CAMBRIDGE, MA

Mr. **Cooper**. General Allen has given a comprehensive statement, and in a summary of our report and position. I would just like to pick out one item in his statement and amplify it a little bit. It is the point he makes on page 7 of the statement, that in all of the countries that we visited, there was strong support for the objective of keeping militarily significant technology from reaching the Soviet Union. The objective was not controversial in any of our discussions with foreign officials or businessmen. Their differences with the United Senate are not over the stated objectives but rather over two issues about the current program. One is the scope of what the U.S. administration has defined as being militarily significant.

MILITARILY SIGNIFICANT TECHNOLOGY

And second, and on a point related to that, the enforceability of a system that includes a wide range of commodities whose military significance is not universally obvious. The United States has tended to have a more generous view of what is militarily significant than our allies, verging at times, on anything that significantly helps the Soviet economy. The allies, while sharing our objective with regard to the Soviet military, will not countenance what they consider to be general economic warfare against the Soviet Union. So they do not accept the broad U.S. definition of military significance. The most dramatic illustration of that was the Soviet gas pipeline, which we argued was militarily significant, and the Europeans simply didn't accept that view.

Also, the kinds of examples that we use, of the use of U.S. equipment and technology by the Soviet military—Eastern European coal—it is not sufficient to show that a particular machine tooling center, for example, which is a quite general purpose machine tooling center without special competencies, has been used to make Soviet military parts for tanks. The Europeans will say it might be so, but it is a general purpose piece of equipment. It is not enhancing their military capacity significantly.

And we heard an example this morning, to be sure applied to Iran, not the Soviet Union, that some parts of the United States Government were objecting to the sale of computers to the press, because the press can be used as a propaganda vehicle for supporting a war. But that is the kind of thing that produces snickering cynicism in foreigners. They want a higher standard of military significance met than that kind of argument implies.

Second, there is an important question of enforceability. Today there are tens of thousands of items that move in international trade, including many high technology items through many, many channels. And effective enforcement of any controls system requires not only vigiliant willing cooperative officials in other countries, but it also relies critically on the private firms that generate and ship the technologically significant goods for information, for intelligence, if you like, on suspicious transactions, on suspicious buyers, and so forth. This is an essential part of making the system really work, and unless the system itself is thought to be justifiable and workable, that cooperation will be coming forward from the high-technology firms in Europe and Japan.

So the system has to be seen to be justifiable and workable, and the United States needs to persuade other countries that it is justifiable and workable.

Now it is true that we still have a lot of clout, and we can bludgeon cooperation out of our allies on some occasions, and we have done it from time to time. We have to do that, but if we bludgeon rather than persuade, it seems to me we will weaken the alliance. We will see disaffection, and we will induce the withdrawal of the alliance from U.S. equipment and technology components from other products instead of instilling willing cooperation. And in the long run, that will be more destructive or do more damage to our national security than we will have gained by blocking a particular sale, which we couldn't persuade them needed to be blocked, and therefore, we bludgeoned them.

Thank you.

Senator **Sarbanes**. Mr. McLucas?

JOHN McLUCAS, CEO, QUESTTECH CORP., MEMBER NATIONAL ACADEMY OF SCIENCES PANEL ON NATIONAL SECURITY EXPORT CONTROLS, McLEAN, VA

Mr. **McLucas**. Thank you, Mr. Chairman.

I would just augment a few points that the previous two speakers have made, and I will answer a question that you haven't asked me, and that is, is legislation needed? In my view, legislation is needed, because the present system seems to be bogged down, and I think the initiative that is being taken here is very appropriate. I have read these proposed bills, and without analyzing them, they look good.

I would like to make a point that I think sometimes gets overlooked. Our security depends, in my view, mainly on strengthening our technology base and on running faster, so to speak, in a technological sense rather than on trying to preserve what we now have. Control systems basically tend to preserve what you've got rather than encouraging you to move ahead. This means that with that technological base expanding, we can apply as much of that as we choose to improving the capability of our military. If we want to stay ahead of the Soviets militarily, one of the best ways to do that is to apply the technology, whether it comes out of the civil side or through military developments to our modern weapons.

The question comes up about the unilateral controls. I think maybe unilateral controls were practical at one time, but now, if you look at those areas where the United States holds the lead, and I think most areas we do have the lead in technology over our allies. The lead is very small. In many cases, it is vanishingly small.

If I had to put a number on it, I would say it used to be 30 or 40 percent. Now it is 5 percent. Now obviously, that is an over generalized statement, but if through lack of arriving at agreements with our CoCom partners, it is possible for the Soviet bloc to get systems that are, say, 5 percent less capable than ours, they've got essentially the same capability. Therefore, this stresses the need for international controls through a CoCom-derived mechanism.

All the studies that I have seen indicate that the lag of the Soviets remains more or less the same. We've had control systems that work better or worse at one time or another, but the Soviet lag seems to be more constant. Some are in the 5 to 10 year category. I think that demonstrates that we have done a relatively good job of technological innovation. Maybe it also illustrates the difficulties that they've had in carrying out, in their society, technical advances which come relatively easy for us.

I'd like to make one closing comment about foreign availability. We have a system in place that if foreign availability can be established, we will change our control system.

As you know, we've had this system in place for years and years. And there's hardly a case where we can cite that the foreign availability process has worked.

There, again, I would say that legislation could be helpful. I think it helps the administration, and it helps get the attention of the administration to strike a better balance between the controls which must be maintained and the crisis in trade which we now must deal with in a better way.

Thank you.

[The complete statement of the panel follows:]

Executive Summary

ABSTRACT

In this study the panel was charged to examine the current system of U.S. and multilateral national security export controls and to seek strategies to regulate international technology transfer in such a manner as to achieve a desirable balance among the national objectives of military security, economic vitality, and scientific and technological advance. Three general principles underlie this analysis—namely, that it should be the policy of the United States (1) to promote the economic vitality of Free World countries, (2) to maintain and invigorate the domestic technological base, and (3) to cooperate with its allies to impede the Soviet Union and other Warsaw Pact countries in their efforts to acquire Western technology that can be used directly or indirectly to enhance their military capability.

The panel finds that national security export controls, when developed and implemented on a multilateral basis, are an appropriate policy response to two facts. One is that dual use technology—that is, technology that has both commercial and military applications—has become increasingly important to Western military security. The other is that the Soviet Union and its Warsaw Pact allies continue to pursue aggressive technology acquisition in the West. The panel further finds that efforts by the United States since the late 1970s to enhance the effectiveness of national security export controls were necessary in view of both intelligence on the nature and extent of Warsaw Pact technology acquisitions and the continued diffusion of technological capability outside the United States. Nevertheless, the panel believes that U.S. control policies and procedures are in danger now of overcorrecting in that they fail to promote both military security and economic vitality, two objectives set forth in the statutes authorizing national security export controls. The panel also finds that, although appropriate statutory authority appears to exist, the U.S. policy process for national security export controls lacks proper direction and affirmative leadership at the highest level of government. The result is a complex and confusing control system that unnecessarily impedes U.S. high-technology exports to other countries of the Free World and directly affects relations with the CoCom allies.

Accordingly, the panel recommends that the United States exercise stronger leadership in building a multilateral community of common controls for dual use technologies among cooperating countries, which will involve further strengthening of the CoCom mechanism, eliminating certain controls on trade among CoCom countries, and developing effective control arrangements with other technologically advanced nations. In the domestic context the panel recommends that executive branch policy decisions on national security export controls accord greater importance than they currently do to maintaining U.S. technological strength and the economic vigor and unity of the Western alliance.

INTRODUCTION

The vigor of science and technology in the Western* democracies and the greater economic vitality of these nations in comparison to the Soviet bloc are sources of strength for the West in its continuing effort to maintain its military security. The Soviet Union lacks these advantages: it seeks to compensate for them by directing a substantial portion of its gross national product to the development and production of military equipment and by making aggressive attempts to acquire and apply Western technology to its military programs. Although the prime targets of the Soviet acquisition program are military hardware and technology related directly to military systems, dual use products and technology† available for sale in international markets also constitute major targets. The importance of dual use technology to Western economic vitality poses a policy dilemma for the West in turn: The open communication and free markets that are fundamental to the Western advantage in technology also facilitate the Soviet acquisition effort. Given what is known about the scope and extent of these Soviet activities, the West must pursue a dual strategy of continuing to maintain its technological leadership over potential adversaries while also denying—or at least impeding—their access to militarily significant Western technology.

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* As used throughout this report, *Western* or *West* includes Japan.

†Items that have both commercial and military applications (e.g., microelectronic components or computers of certain performance parameters).

This study had a twofold objective: (1) to examine the current system of laws, regulations, international agreements, and organizations—defined collectively as the national security export control regime[*]—that control the international transfer of technology through industrial channels; and (2) where appropriate, to recommend new approaches to achieve the interrelated national policy objectives of military security, scientific and technological advance, and economic vitality.

To achieve this objective the panel and its professional staff undertook a broad agenda of research and briefings.

- Pertinent public literature was analyzed as well as restricted documents from the various federal agencies involved in export control policy formulation—e.g., the Departments of Defense, Commerce, State, Treasury (U.S. Customs Service), and Justice.
- Representatives of these agencies briefed the panel, as did the Intelligence Community in classified session.
- The panel also heard the views of industry (including a broad range of sectors and firm sizes) and held a series of discussions with individuals well-versed in aspects of the national security export control regime.
- Delegations of the panel traveled to six European countries (Austria, Belgium, France, Great Britain, Sweden, and West Germany) and five Asian countries (Japan, Hong Kong, Malaysia, Singapore, and South Korea) for frank and confidential meetings with government officials, industry leaders, and other informed observers on export control matters.
- The panel commissioned a series of research reports, prepared both by outside consultants and by the panel's professional staff. Some of these studies developed and analyzed new primary data; others reexamined existing problems from new perspectives.

From these efforts has come a set of general principles and specific prescriptions for developing a more balanced and effective national

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[*] The panel was not charged to consider other applications of export controls including foreign policy and short supply constraints. Thus, although foreign policy controls may occasionally become intertwined or confused with national security controls, they are examined here only to the extent that they impinge on the effective functioning of the national security export control regime.

security export control regime. The panel's findings and recommendations are set forth in the concluding sections of this summary. The three general principles that underlie the panel's analysis propose that *it should be the policy of the United States*

- to promote the economic vitality of Free World countries,
- to maintain and invigorate the domestic technological base, and
- to cooperate with its allies to impede the Soviet Union and other Warsaw Pact countries in their efforts to acquire Western technology that can be used directly or indirectly to enhance their military capability.

As a general policy, the United States should strive to achieve clarity, simplicity, and consistency in its national security export control procedures, as well as in the multilateral CoCom[*] export control structure, and broader consensus on the need for national security export controls among the Free World nations that use and produce dual use technology. To achieve these ends the United States should develop policies and procedures that emphasize efficiency and effectiveness rather than total comprehensiveness.

THE TECHNOLOGY TRANSFER PROBLEM

Intelligence information reviewed by the panel—including some at high levels of classification—indicates that the Soviet technology acquisition effort is massive, well financed, and frequently effective. Militarily significant Western technology has flowed to Warsaw Pact countries in recent years through three primary channels:

- *espionage*—the theft of classified information or items of relevance to military systems;
- *diversion*—shipment of militarily significant dual use products and technology to unapproved end users, either directly through the export of controlled products without a license (i.e., smuggling), or indirectly through transshipment using a complex chain of increasingly untraceable reexports (i.e., legal transshipment of products or components by firms operating in countries that do not impose controls); and
- *legal sales*—direct trade with the Soviet bloc, usually after receipt of a license. Such trade also may include some reexports.

As in other areas of intelligence, data on Soviet acquisition of militarily sensitive technology are incomplete and fragmentary and often become available relatively late in the development of national security export control policy. Nevertheless, available evidence—including the so-called "Farewell" papers, which are actual Soviet documents obtained by French intelligence services in 1981 detailing the plans, organization, and financing for technology acquisition efforts in the West—indicates that, by the Soviets' own estimates, approximately 70 percent of the items they target and eventually acquire in the West are subject to some form of national security export control. There is also growing concern in the Intelligence Community about the extent to which the Soviet Union and other Warsaw Pact countries have been or may be able to obtain controlled technology in Free World countries that do not cooperate in national security export controls. This concern applies both to the industrialized neutral countries of Europe and to some of the more advanced newly industrializing countries (such as India, Singapore, and Brazil).

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[*] CoCom, or the Coordinating Committee on Multilateral Export Controls, is an informal, nontreaty organization composed of Japan and all the member nations of the North Atlantic Treaty Organization (NATO) except Iceland.

It is only on rare occasions—for instance, when isolated examples of specific Western components, or copies of them, appear in Soviet military equipment—that the Intelligence Community can declare without reservation that the application of Western technology has contributed substantially to Soviet military developments. As a result, assessing the impacts of technology acquired by the Soviets is subject to considerable uncertainty. In general, it appears that the loss of a few items does not raise significant risks. Although the Soviets may attempt to reverse-engineer a technology (i.e., use an item obtained in the West as a basis for producing the technology themselves for their military systems), the panel has come to believe that this process is generally unproductive for many types of items (for example, high-density semiconductor devices).

Nevertheless, certain key items of process control or manufacturing hardware (known as keystone equipment) *can* provide the Soviets with substantial leverage—even if only a few are obtained—because these items facilitate the production of quantities of other hardware. Consequently, a prevalent judgment in the United States is that the emphasis of national security export control policy properly should be on constraining the flow of manufacturing equipment (specifically, some types of turnkey plants and know-how related to that equipment) rather than on the end products of the manufacturing process.

Although there are some cases in which different conclusions can be drawn, on the basis of available information the panel has determined that for most types of dual use technology the Soviet Union is approximately 5 to 10 years behind the West and does not appear to be closing the gap. The situation is different for military technology. Although the West remains generally ahead in the most advanced systems, the Soviets' great emphasis (relative to that of the United States) on the development and production of military hardware results in fielded equipment that in specific cases is as modern as that deployed in the West. However, as indicated in the 1986 Packard commission report *A Quest for Excellence: Final Report to the President*, it is important to understand that this fact may reflect delays in the U.S. procurement process rather than a failure of export controls.

Despite years of effort, then, the Soviets continue to lag the West technologically, and this gap may actually be widening due to Soviet dependence on generally outdated Western equipment and technology (particularly in the field of computer science). Although it would be foolhardy for the United States or other CoCom nations to facilitate Soviet access to militarily critical technology, the panel considers it unlikely that an influx of Western technology will enable the Soviet bloc to reduce the current gap substantially—as long as the West continues its own rapid pace of innovation.

There are other facets of the technology transfer problem that also warrant attention. Intelligence evidence on the extent of unwanted West-East technology transfer must be juxtaposed against the fact that the United States is now confronted with a dramatically altered economic and technological environment—an environment substantially different from that existing for most of the post-World War II period. The panel reviewed in this regard the implications of the following five major developments.

1. *The character of the international marketplace is evolving in such a way that diffusion of technology is rapid and global in scope.* Factors promoting this diffusion include the tendency among multinational corporations to locate research, development, and production facilities around the world and the existence of indigenous capability in many developing countries. Massive amounts of information must be transferred by such companies as they attempt to control and coordinate their international efforts.

2. *There is a growing global market for dual use products, most of which embody advanced technology.* The high-technology sector demands heavy investment in research and development. The rapid technological advances promoted by this investment are tending to push commercial development of technology ahead of military development—a reversal of the pattern established after World War II. Acceleration of commercial development, coupled with a lengthening of the U.S. military procurement cycle, has resulted in the increased availability of dual use products embodying technology more sophisticated than that deployed by the military.

3. *Because trade is a steadily growing part of U.S. economic activity,*

policies that affect it are increasingly important to the overall U.S. economy. The United States is the single largest international trader, reporting exports of $360 billion in 1985. U.S. exports to CoCom countries represented over 60 percent of that total in 1985; in contrast, exports to Soviet bloc countries represented less than 1 percent of U.S. exports for that year. Trade policies that might diminish West-West trade thus have greater potential to damage the U.S. economy than do those that might reduce exports to the Eastern bloc. Although export controls are not a leading cause of the recent decline in U.S. high-technology performance, they may contribute to lost sales and to an environment that discourages export activities by U.S. firms.

4. *U.S. dominance over advanced technology is declining.* The United States now faces stiff competition in almost every high-technology sector from companies in both developed and developing countries with non-U.S.-source technology. The growing technical sophistication of such countries is the result of long-term efforts to develop and enhance indigenous technical capability. (In a growing number of cases, the commitment of resources by such countries now surpasses that for similar efforts made by the United States.) The newly industrializing countries currently do not possess sufficient indigenous high-technology capability to compete at the cutting edge of most industries, but many are beginning to make great strides toward this goal and are already effective competitors at somewhat lower but still technologically sophisticated levels. Thus, the United States cannot succeed in its efforts to block Soviet acquisition of militarily sensitive Western technology unless it has the full cooperation of the (increasing number of) other technologically advanced countries that may represent alternative sources of supply.

5. *Maintaining the vitality of all the Western economies has assumed greater importance for the national security of the United States.* To the extent that technological and economic leadership is now shared with the other principal CoCom countries—namely, Japan, the United Kingdom, France, and the Federal Republic of Germany—it is essential to the national security interests of the United States, for both military and trade reasons, that the economies of these countries remain strong.

THE CURRENT NATIONAL SECURITY EXPORT CONTROL REGIME

The national security export control authority exercised by the executive branch is substantially unchanged in its basic legal structure from that originally granted by Congress in 1940 as an extraordinary war power. Two laws provide the primary statutory mandate. The Arms Export Control Act of 1976 requires government approval for the import and export of military weaponry and services. The Department of State implements the act through the International Traffic in Arms Regulations (ITAR); ITAR is based on the U.S. Munitions List, which is maintained by the Department of Defense (DoD). The Export Administration Act (EAA) of 1979, as amended, controls dual use goods and technologies that could make a significant contribution to the military capabilities of a potential adversary. EAA, which is implemented by the Department of Commerce through the Export Administration Regulations (EAR), also authorizes controls that may be necessary to serve U.S. foreign policy goals and to ensure the domestic availability of resources in short supply.

The regulations implementing the national security export control regime are extensive and complex. Many federal departments and agencies share administrative responsibility for their implementation and participate in the export control policymaking process. The roles of the executive branch agencies are assigned variously by legislation, by regulation, or by executive order. In general, the Commerce Department regulates exports of commercial equipment and technology, while the State Department controls exports of military equipment and technology. DoD advises both agencies on the strategic significance of commercial and military exports. The Department of Commerce and the U.S. Customs Service share responsibility for enforcement of national security export controls.

Multilateral agreements and procedures play an essential role in denying militarily useful technology to potential adversaries. In fact, the heart of the national security export control regime is a set of restrictions on exports to the Soviet bloc, which is maintained on a multilateral basis through the Coordinating Committee on Multilateral Export Controls (CoCom), of which the United States is a founding member. CoCom administers three lists of controlled items: munitions, nuclear energy, and dual use. Many but not all the items on the U.S. Control List parallel items found on the CoCom dual use list (known as the International List). The United States also has bilateral agreements or arrangements with a number of non-CoCom countries that provide for varying degrees of cooperation on national security export controls.

ASSESSMENT OF THE CRITICAL ISSUES

National security export control policy should be the result of a process that weighs the benefits of controls in relations with potential adversaries against their costs in terms of the domestic economy and relations with allies and friendly trading partners. The potential benefits of controls derive from two factors: (1) they make it more difficult for the Soviet Union and its allies to upgrade their military systems through information.

technology, and products acquired in the West; and (2) they require the Soviet Union to commit substantial domestic resources to military research and development instead of using acquired Western technology to shortcut the technological development process.

Both the costs and benefits of controls are difficult to assess with precision. There is evidence that controls do slow Soviet acquisition efforts and increase the price of the items they acquire, a conclusion supported at the unclassified level by the Farewell papers (see p. 5), which indicate that during the Tenth Five-Year Plan (1976-1980) the Soviet acquisition program satisfied more than 3,500 specific collection requirements for hardware and documents for the 12 Soviet industrial ministries. The documents also indicate that for 1980 alone the Soviet Union allocated (in rubles) substantially more than $1 billion for the collection of Western documents, blueprints, test equipment, and other hardware.

There are also data that suggest that most of the benefits of controls are concentrated in a relatively narrow range of products and technologies. This range includes advanced equipment for manufacturing high-density semiconductors, automated process equipment for the fabrication of specialized metals and composites, very-high-speed computers, extremely precise test instruments, and aircraft components that can be readily adapted to military uses.

The potential costs of controls also are hard to measure because they derive from the web of competitive and cooperative relationships among Western countries. Nevertheless, the panel did consider it important to attempt an estimate of those costs to the U.S. economy that are associated mainly with current features peculiar to the U.S. national security export control system. Of principal concern are the present and future sales and market share (both West-West and West-East) and reduced investment in research and development that U.S. producers of goods and technologies may lose or forego—without the compensating national security benefits of denying the Soviets embargoed technology—as a result of how the U.S. control system is designed and administered and of how it compares with the control systems of other countries with competitive suppliers. For example, reduced revenue from lost sales and market share may translate into less investment, a lower growth rate, and reduced innovation, with resulting adverse effects on both the commercial and military sectors. In addition, technology controls also have created friction among the Western allies—friction that may interfere with their successful collaboration on weapons development, production, and standardization, or on other matters bearing directly on East-West relations.

In contrast to their benefits the costs of export controls are spread across an enormous volume of transactions representing a large share of

U.S. trade. Based in part on data provided by the Commerce Department, the panel estimates that 40 percent—approximately $62 billion—of all U.S. exports of nonmilitary manufactured goods in 1985 were shipped under a license requiring prior approval. In addition, U.S. controls extend to sales by U.S. foreign subsidiaries and independent foreign companies using products, components, parts, services, and technology of U.S. origin.

In an effort to assess the operation and some of the effects of export controls, the panel analyzed a sample of licenses[*] for goods classified by level of military sensitivity using administrative criteria developed in U.S. government deliberations and/or CoCom negotiations. The analysis showed that the broad control net is heavily weighted with transactions involving items of less than critical military importance with customers in friendly Western countries. Ninety percent of individual license applications are for exports to Free World countries. One-third of these applications are for items that may be exported to CoCom countries under a general license and even to Soviet bloc destinations without prior CoCom approval. Roughly two-thirds of license applications are for items sufficiently lacking in military importance that they may be shipped to the People's Republic of China (PRC) without prior CoCom approval. Only about 13 percent of the applications are for very sensitive items that require an individual U.S. license to all countries (i.e., they are not eligible for export under a bulk license) as well as CoCom approval for shipment to the bloc or the PRC.

The sheer volume of transactions subject to government review and approval sharply limits the ability of licensing officers to focus on more critical items. Data obtained from the Commerce Department indicate that individual license applications for exports to the Warsaw Pact and to Western countries that exercise little control—and are therefore potential points of diversion—appropriately receive more scrutiny than those for exports to CoCom destinations. But the current control regime does not apply similar discrimination to sales within the West of products having greater and lesser military significance.

The adverse competitive effects of export controls could be alleviated by the establishment of a community of common controls in dual use technology (i.e., a set of trade relationships unimpeded by national security restrictions) among cooperating Free World countries. Such an arrangement does not now exist. U.S. national security export controls encompass more products and technologies, are generally more restrictive, and entail more administrative delays and shipper uncertainties than those of the other major CoCom countries. Only the United States requires foreign resellers, even in countries that are our closest allies, to obtain the prior approval of—or to account periodically to—the U.S. government for reexports of U.S.-origin products, U.S.-origin parts and components incorporated into foreign equipment, and foreign products manufactured with U.S.-origin technology. These controls appear even more restrictive in light of the fact that many controlled products are available from or through non-CoCom countries with few or no restrictions.

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[*] The panel requested and was granted a "national interest exception" under Section 12(c) of the Export Administration Act permitting its consultants unprecedented access to Commerce Department license files and data bases, subject to strict observance of confidentiality of business information. The subsequent analysis conducted by consultants was of a sample of 1,618 processed license applications categorized by Commerce Department license officers.

There is both anecdotal and statistical evidence that the relative stringency of U.S. controls is, with increasing frequency, causing Free World customers to turn to non-U.S. suppliers or to begin to explore alternative sources including internal development. Respondents to a panel survey of U.S. companies,* reflecting on their experience during the 12 months prior to May 1986, perceived the control system as frequently having significant adverse effects on their business:

- 52 percent reported lost sales primarily as a consequence of export controls;
- 26 percent had business deals turned down (in more than 212 separate instances) by Free World customers because of controls;
- 38 percent had existing customers actually express a preference to shift to non-U.S. sources of supply to avoid entanglement in U.S. controls; and
- more than half expected the number of such occurrences to increase over the next 2 years.

In addition, the panel has documented that U.S. exporters already have lost business to suppliers in other technologically advanced nations because of unilateral controls on analytic instrument exports and on independent foreign distributors and equipment manufacturers operating under U.S. distribution licenses. In the first instance, the short-run loss attributable to export controls is about 10 percent of the value of U.S. exports; in the second instance, the loss to date is smaller. But over time, as the relative restrictiveness of U.S. controls becomes more consequential to existing and potential foreign customers, the greater the weight such restrictiveness is likely to be given in customers' choices among suppliers. (This process has been referred to by some as "de-Americanization.")

These losses are occurring at a time when U.S. producers are experiencing a decline—for reasons unrelated to export controls—in their relative competitive advantage. This decline is appearing not only in level of technology but also in price competitiveness, product quality, marketing, and service—factors that might otherwise more than compensate for the negative competitive effect of export controls. All policies that contribute to a loss of U.S. competitiveness are of concern, not solely from an economic standpoint but also due to national security considerations. By promoting the emergence and growth of alternative sources of technology to the Soviet Union, such policies make denial or delay yet more difficult to achieve.

One indicator of the *effectiveness* of the control effort is the level of corporate compliance. Although this level can never be determined precisely, there is evidence that compliance has increased in recent years as the current U.S. administration has committed substantial resources to vigorous enforcement. It is difficult, however, to determine whether the enforcement campaign has reduced the number of intentional diversions. Moreover, in terms of the enforcement of reexport controls, the overwhelming majority of applications continue to come from U.S.-headquartered companies and their foreign affiliates, suggesting that compliance by foreign-owned firms is relatively poor. A possible explanation of this phenomenon may stem from foreign attitudes toward these controls as well as from the fact that such controls often duplicate those already imposed by the exporting country. Where there are non-U.S. sources willing to supply comparable products, foreign firms that know of the attendant requirement to comply with U.S. export restrictions may have little incentive to buy U.S. products.

There are also indications that the licensing process discriminates against small- to medium-sized firms. With regard to license denials, processing delays, inaction, and conditional approvals—all factors contributing to uncertainty—there is a pronounced firm-size differential in the administration of national security export controls. Relative to those of large-volume exporters, small firm applications to Free World destinations take 25 percent longer on average.

An indicator of the *efficiency* of the administrative control effort—and a perennial concern of Congress, the business community, and the responsible agencies—is the time it takes to process export licenses. Shipping delays impose direct costs on the exporter and an indirect cost in customer confidence. Both the Commerce Department and DoD have expended substantial effort and resources to speed up the licensing process, and both have made progress in reducing *average* processing times. What averages in this instance obscure, however, is the highly skewed distribution of processing times. The distribution has an extended "tail," and it is these cases that both absorb a large proportion of the corporate resources devoted to working the system and create uncertainty in the market. The number of such cases is not insignificant; for approximately 5 percent of all applications (and there were 122,606 total applications in 1985), the processing time extends beyond 100 days.

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*The sample of companies surveyed was oriented toward firms in the electronics (equipment and components), aircraft (airframes, engines, and parts), instrumentation, and machine tool sectors. The 170 respondents accounted for roughly $36 billion of foreign sales in 1985 or approximately 28 percent of estimated total U.S. high-technology sales.

The efficiency of U.S. export control administration is hampered to a substantial degree by the shared responsibility distributed among the relevant agencies—the Departments of Commerce, State, and Defense. It is hampered further by the fact that neither the Department of Commerce nor the Department of State has made as much progress as the Department of Defense in upgrading their human and technical resources and in automating the licensing process. The result is a lack of balance in interagency policy deliberations and inefficiency in the licensing process. Currently, there is also no effective mechanism for weeding out from the Control List those products and technologies that have ceased to be strategic or that have become so widely available that control, for all practical purposes, is impossible. The momentum is to add, not to delete, and the principal licensing agency (the Department of Commerce), with a stake in keeping its task from becoming unmanageable, has been unable to slow it down.

The Militarily Critical Technologies List (MCTL), which is maintained by DoD, serves a limited purpose within the department as a reference document for developing control proposals and informing licensing decisions. It is also useful for identifying those goods and technologies that have dual use potential. But before goods and technologies actually can be controlled, it is necessary to assess their foreign availability (and other factors affecting controllability) and then to strive to gain CoCom-wide restrictions.

One of the principal outcomes of the continuing interagency disagreement on export control policies and procedures has been the virtual breakdown of the technology decontrol process based on positive foreign availability findings, a process originally mandated by Congress in 1979. This breakdown is largely attributable to the fact that no time constraints are specified in the legislation for government completion of investigations of foreign availability. A related problem has been the substantive disagreements between the Departments of Commerce and Defense over both the criteria for determining foreign availability and the strategic importance of particular items. The resulting de facto veto authority exercised by DoD thwarts the intent of Congress, which designated the Department of Commerce as lead agency in determining foreign availability.

Through foreign policy and economic cycles, the premise that Soviet acquisitions of leading Western dual use technologies represent a serious military threat has not been seriously challenged anywhere in the Western alliance. Although there have been lapses in attention and frequent disputes over scope and means of control, this consensus continues to underlie the success of the current administration's effort to revitalize the CoCom process. The goal of U.S. policy thus should be to so improve the multilateral control system that it is possible to remove controls from West-West trade. The panel believes, however, that there are two features of current U.S. policy that impede progress toward this goal: (1) the tendency to resort to foreign policy trade sanctions to penalize Soviet political behavior without distinguishing such sanctions from national security controls and without consulting our allies before imposing them; and (2) the continuance of extraterritorial controls that signal U.S. mistrust of our CoCom partners and offend their national sovereignty.

These problems notwithstanding, the persistent efforts of the United States over the past 5 years to strengthen CoCom and improve its operational efficiency and effectiveness have produced positive results—results that have not been achieved without certain difficulties. Gaining a consensus among CoCom members has not been easy. The interests of member countries can differ significantly, and each one evaluates the value of trade restrictions against proscribed countries differently. Furthermore, additional efforts now will be required to bring about greater harmonization of national policies on the part of all participating countries to work toward a fully multilateral community of common controls.

Cooperation from countries that are not members of CoCom has become important to the success of the CoCom control efforts. It will be critical in the future as a growing number of third countries become significant markets for CoCom-controlled goods and develop indigenous products that fall within CoCom control parameters. CoCom members have formally agreed—as part of the so-called "third country initiative"—to urge non-CoCom Free World nations to establish and strengthen their controls vis-à-vis proscribed nations. In this regard the United States, with the support of its CoCom allies, has achieved some success in pursuing bilateral agreements with friendly, non-CoCom Free World countries to protect some CoCom- and U.S.-origin goods. Although such agreements have been reached with a few countries, however, none of those concluded to date comes close to meeting the comprehensive criteria proposed by the United States for protecting CoCom-proscribed technology from *all* sources including that produced indigenously.

FINDINGS AND KEY JUDGMENTS OF THE PANEL

Based on the research initiatives and deliberations undertaken in pursuit of its charge, the panel reached unanimous agreement on a series of principal findings and key judgments listed below.

I. THE PRACTICAL BASIS FOR NATIONAL SECURITY EXPORT CONTROLS

The fundamental objective of the national security export control regime maintained by CoCom is to deny—or at least to delay—the Soviet Union and its Warsaw Pact allies access to state-of-the-art Western technology that would permit them to narrow the existing gap in military systems. Yet, there are no well-defined criteria that can be used to determine whether a given technology will enhance significantly Soviet military capability. Moreover, the precise definition and implementation of such criteria will depend to a large extent on the world view of the decision maker. For an export control system to be operationally effective, however, such distinctions must be drawn. This difficulty can be surmounted in practice by establishing a definition that permits effective, practical implementation of controls with our allies, which means restricting controls to technologies that are easily identified with military uses.

II. CONSIDERATIONS INFLUENCING NATIONAL POLICY

1. **Technology lead is vital to Western security and must be maintained.**

   Western security depends on the maintenance of technology lead over potential adversaries. This lead can only be sustained through a dual policy of promoting a vigorous domestic technological base and impeding the outward flow of technologies useful to the Warsaw Pact in military systems.

2. **Export competitiveness is essential to the health of the U.S. domestic economy.**

   In some industrial sectors, especially high-technology enterprises, firms now must remain competitive in the world market to maintain a share of the U.S. domestic market, due to necessary economies of scale and the increased importance of R&D from foreign sources. The new realities of global competition are not yet fully reflected in the policies underlying current U.S. national security export controls.

3. **The scope of current U.S. national security export controls undermines their effectiveness.**

   U.S. national security export controls are not generally perceived as rational, credible, and predictable by many of the nations and commercial interests whose active cooperation is required for an effective system. In their view the scope of current U.S. controls encompasses too many products and technologies to be administratively feasible. The panel concurs with this judgment.

4. **U.S. national security export controls impede the export sales of U.S. companies.**

   There is limited but specific evidence that export sales have been lost or foregone because of uncertainty or delays in the licensing process and because of concern about future license approvals, availability of spare parts and components, and possible reexport constraints. Once changes in buying preferences occur, they may require large investments of time and effort to reverse.

5. **Pragmatic control lists must be technically sound, narrowly focused, and coordinated multilaterally.**

   Although the control criteria developed in 1976 as part of the report of the Defense Science Board task force (*An Analysis of Export Control of U.S. Technology—A DoD Perspective*), also known as the Bucy report, are theoretically sound, they have not always proven useful to the implementation of national security export controls. The preparation of control lists must be a dynamic process that is both informed by advice from technical advisory groups and constrained by the need to be clear, to focus control efforts more narrowly on fewer items, and to coordinate U.S. action more closely with that of our CoCom allies.

6. **The extraterritorial aspects of U.S. controls engender mistrust and weaken allied unity.**

   Several elements of U.S. national security export controls, especially the requirement for reexport authorization, are having an increasingly corrosive effect on relations with many NATO countries and on other close bilateral relationships. They signal U.S. mistrust of the will and capacity of allies to control the flow of sensitive technology to the Soviet bloc.

III. SOVIET TECHNOLOGY ACQUISITION EFFORTS IN THE WEST

1. **Available evidence on Soviet technology acquisition efforts reinforces the need for effective multilateral export controls.**

   The panel has reviewed a substantial body of evidence—both classified and unclassified—that reveals a large and aggressive Soviet effort to target and acquire Western dual use technology through espionage, diversions, and to a lesser degree legitimate trade. There is limited but specific evidence both on the means by which Soviet acquisitions are accomplished and on their important role in upgrading or modernizing Soviet military systems. Although internationally coordinated efforts are necessary to counter the use of diversions or legitimate trade for such purposes, export controls are not a means for controlling espionage, which alone accounts for a high proportion of successful Soviet acquisition activities.

3. **Despite systemic difficulties, Soviet technical capabilities have successfully supported the military objectives of the USSR.**

   Because the Soviet system does not enjoy the benefits of a robust commercial sector, it is at a fundamental disadvantage in terms of the promotion of technological innovation. Nevertheless, the Soviets have demonstrated an effective technical capability to meet their military objectives.

IV. DIFFUSION AND TRANSFER OF TECHNICAL CAPABILITY

1. **Wide global diffusion of advanced technology necessitates a fully multilateral approach to controls.**

   Because advanced technology has now diffused so widely, national security export controls cannot succeed without the following: (1) an effective CoCom process by which the other major CoCom countries accept responsibility for regulating exports and reexports from their territory of CoCom-controlled technology to non-CoCom Free World countries; and (2) the adoption by the more advanced newly industrializing countries of CoCom-like standards for their own indigenous technology.

2. **Controls on the employment of foreign nationals in the U.S. R&D infrastructure must be used selectively and sparingly.**

   Foreign nationals now play a significant role in U.S. domestic R&D activities as well as in the laboratories of U.S. foreign subsidiaries. Such individuals contribute significantly to U.S. technological innovation and hence promote the national interest. Sparing use should therefore be made of existing legislative authority to restrict technical exchanges or to limit full participation of foreign citizens in the U.S. R&D community. It is particularly important to distinguish, as appropriate, between citizens of nations to whom exports are proscribed and citizens of all other nations.

V. FOREIGN AVAILABILITY AND FOREIGN CONTROL OF TECHNOLOGY

1. **The congressional mandate for decontrol of items based on foreign availability is not being fulfilled.**

   The lack of action on foreign availability is inconsistent with the intent of Congress as expressed most recently in the Export Administration Amendments Act of 1985. In those cases in which there is foreign availability of U.S.-controlled items, U.S. industry is unfairly placed at a competitive disadvantage with respect to firms from other countries that are not similarly constrained. This disadvantage can lead to the erosion of competitive market advantages previously enjoyed by U.S. industry and in some cases to the permanent loss of U.S. markets.

2. **Control of "technological commodities" is impractical.**

   The control of goods for which the volume of manufacture is so large and the scope of marketing and usage so wide that they have become "technological commodities" (e.g., some classes of personal computers or memory chips) is not practical. Decontrol of such goods to all Free World destinations is, in some cases, the only appropriate solution.

3. **Bilateral agreements with Free World non-CoCom countries must protect all CoCom-origin technology and must control similar indigenously produced goods.**

   Over the short term, bilateral agreements that restrict only the reexport of U.S.-origin technology unfairly disadvantage U.S. companies in international trade. Over the long term, these agreements with non-CoCom countries will not promote the effectiveness of the CoCom export control system unless they restrict the reexport of technology from all CoCom sources as well as technology produced indigenously.

4. **Other CoCom countries must be more vigilant in preventing diversions of both CoCom-origin and indigenously produced technology.**

   Some members of CoCom could substantially improve their efforts to prevent diversions of CoCom-origin products and technology being exported to third countries. Since compliance with U.S. reexport controls is not likely to become politically acceptable in most CoCom countries, some compromise solution must be reached.

5. **The extraterritorial reach of U.S. controls damages allied relations and disadvantages U.S. exporters.**

   The extraterritorial reach of U.S. reexport controls is anathema to most U.S. trading partners. Moreover, many foreign governments do not agree that the United States has jurisdiction over the actions of their citizens outside U.S. territory. The extraterritorial extension of U.S. controls is viewed by these governments as a direct challenge to national sovereignty and a clear violation of international law. It is seen as additional evidence of mistrust by the United States of the capacity of these governments to further the West's common interest in preventing the diversion of militarily important goods and technologies.

Senator SARBANES. Thank you, gentlemen, very much. You've been a very effective panel. We have a bit of a dilemma here because the bell just rang a few minutes ago for indication of a vote on the floor of the Senate.

You've been very patient all morning. I don't know what your schedule is. But if we could take a 5- to 10-minute recess and we can go vote, we can return and put the questions to the panel and conclude.

Then we'll go on to our following panel. Does that create a scheduling problem for anyone on the panel?

Mr. ALLEN. I can stay, sir.

Mr. COOPER. Five or 10 minutes is fine. If it's 25 or 30, it does.

Senator SARBANES. The committee will recess briefly in order to vote. We'll resume shortly. [Pause.]

Senator SARBANES. Gentlemen, if you could, Senator Heinz says he has no questions of this panel. I have only one or two. Maybe we could dispose of them very quickly. And that will economize your time.

General, I wanted to ask you on page 9 of your statement, the last sentence in the middle paragraph:

"Indeed, we envisage the elimination of all national security export controls within the community."

When you say "community", what are you referring to there?

Mr. ALLEN. Clearly, the first thing means CoCom. As we would envision it, there are really three layers that one needs to talk about. And that is the first tier of CoCom, where you have very quickly, the United States and those countries who can achieve agreement on a common set.

The next level is the remaining countries of CoCom, some of whom need improvements in their system; as rapidly as those can be made, the restrictions on all trade within CoCom should be removed.

As one has the ability to negotiate understandings with other countries, they should be brought into a CoCom-like process.

Senator SARBANES. So you would sell to these countries anything that our private sector develops?

Mr. ALLEN. The United States would in a very few cases continue to have unilateral controls, but they would be only for those items in which we had a monopoly or which were considered to be of extraordinary military significance.

But I remind you we're only talking about dual use technology. We're not talking about anything covered under munitions or the nuclear aspects of technology. These are dual use technologies—to countries who would agree to embargo provisions that we have on the Soviet Union.

Senator SARBANES. My question is, did you mean to use the word "all" or "most" in that sense?

Mr. ALLEN. Most in the sense that there will remain a few items that can fit under one of two categories. One is the very sensitive and the United States has a monopoly. Therefore, the United States should have its own set of unilateral controls.

And the second one is that, in a few cases in emerging technology, the United States may wish to have a unilateral control for a brief period of time while bringing it to the attention of CoCom.

But, with those exceptions, it should be sold.

Senator **Sarbanes**. Let me ask this question. Is there a danger? I know you say that you've talked to the Europeans and their intent is the same.

Is there a danger at the moment of perhaps an over-extended system? They complain and they want to move it at the margin.

Your assumption is that if you move it so that it becomes what they perceive to be a more realistic system, they will then be willing to enforce it tighter within the area of realism as they perceive it.

Is there the danger that if you shrink it down, they will still seek to nibble it at the margins so that you're constantly having to, in effect, deal with an eroding position because their essential thrust is to want to sell these items?

Mr. **Allen**. Of course there's that danger. The United States must retain leadership. The United States must focus on the higher technology ends that are truly significant. Then get that agreement to increase the enforcement among our allies.

The United States can't abandon its leadership role.

Senator **Sarbanes**. Do you think that the current system gives us the difficulty in enforcing or in achieving cooperation at the higher levels of the scale?

Mr. **Allen**. Yes, because the list is too long. And we try to control too much. We have difficulty.

Senator **Sarbanes**. But is our problem with the current situation only at the lower levels or does it spill over, making it more difficult at the higher level?

Mr. **Allen**. I'm not quite sure I know how to answer that. The focus of our attention is that if the list is narrow and we focus on the high end items, we can do a better job in impeding the flow to the Soviet Union.

Mr. **Cooper**. If I can try to respond to that though, my impression is you really should have some people on the European enforcement site.

My question is, apart from the AEN items, we don't draw any distinction now between lower and higher levels. And the system is just overwhelmed.

There are lots of things on there which they've agreed to, but which they don't really absorb as being all that significant.

There are some things that are extremely significant, but the system is overwhelmed. There's no formal way for distinguishing between lower and higher levels.

I mean, there is the AEN level, which is clearly lower. But the system itself doesn't distinguish above that.

Senator **Sarbanes**. Well, gentlemen, we have to vote. We thank you very much. It was very helpful testimony. Of course, the report is a major contribution to thinking in this area, and we appreciate that very much.

Thank you.

The committee will resume with the next panel in about 10 minutes.

[Recess.]

Senator **Sarbanes**. Gentlemen, we appreciate your patience. We're pleased to now hear from our concluding panel on this morning's issue, the Acting Under-Secretary of State, Ed Derwinski, and Assistant Secretary of Defense, Richard Perle.

Mr. Derwinski, would you like to go ahead?

STATEMENT OF EDWARD DERWINSKI, ACTING UNDER SECRETARY OF STATE

Secretary **Derwinski**. Mr. Chairman, with your permission, I'd like to insert my statement in the record and just touch on the highlights very briefly, recognizing you have a full morning.

Senator **Sarbanes**. I also place in the record a statement by Senators Sanford and Garn, who are tied up on the floor and unable to be here, and also grant permission to Senator Dixon, who would like to submit questions to some of the witnesses for the record, and Senator Graham from Texas would like to submit questions in writing for the witnesses. Please go ahead.

[The opening statements of Senators Sanford and Garn follow:]

Opening Statement of Senator Terry Sanford

Mr. Chairman, I look forward to the testimony of the distinguished witnesses appearing before the committee today, but I must admit that I have grave concerns about the effects that our current export control policies, as they are being implemented by some of the administrators appearing here today, have on our high-technology industries, including many centered in my home state of North Carolina.

I find it hard to accept that, given our Nation's desperate trade situation, American electronics companies are losing billions of dollars a year because of overly complicated American export controls.

I am further distressed each time I hear that, because of complications imposed on them by their own government, American firms are losing their reliability as suppliers of low-cost, high-quality products. Because of policies applied in an overally restrictive manner, American firms are finding it ever harder to sell overseas customers low-technology parts that can be found almost anywhere—in products ranging from commonly available medical devices to personal computers.

More and more of our overseas customers are giving up on us, and turning elsewhere. Some aren't even asking American firms for bids on projects, because they know our export policies will make it difficult for those firms to deliver, on time and on budget.

I find most disturbing the results of the National Academy of Sciences Report that 26% of the companies they surveyed had lost business deals in more than 212 separate instances by Free world customers because of U.S. export controls and that 38% of those surveyed had existing customers express a preference to shift to non-U.S. sources of supply to avoid entanglement in U.S. controls.

According to figures cited by the American Electronics Association, the United States is losing $9 billion a year in exports, due to these restrictions. That $9 billion translates into 180,000 American jobs.

If that continues, American capital, American know-how, and ultimately, American strength, will go elsewhere.

I certainly appreciate the fact that we cannot and should not allow technology imperative to our national security to be exported. However, I am convinced, as the National Academy of Sciences report affirms, that we have gone too far and must immediately take steps to correct that overreaching before our foreign customers have re-designed their products to eliminate U.S. components.

I do commend you, Mr. Chairman, for holding this hearing and I hope these witnesses can give us some sensible ideas about how to correct the imbalances that have been created over the last few years.

Statement of Senator Garn

Mr. Chairman, it is always a pleasure to welcome Secretary Baldrige to the Committee. I look forward to a report on the progress that has been made in our export licensing system since the 1985 EAA amendments were passed. The Commerce Department can be proud of the level of efficiency achieved in less than two years' time.

VI. EFFECTIVENESS OF THE MULTILATERAL PROCESS

1. **The United States must clearly distinguish foreign policy export controls from national security export controls.**

There is much less consensus among the CoCom allies on the use of trade restrictions for foreign policy reasons than on controls in the interests of national security. Thus, to the extent that the United States fails to distinguish clearly between the two, allied cooperation in support of consensual national security objectives is undermined.

2. **The impact of controls on advantageous scientific communication and transfer within the Western alliance must be minimized.**

Because open scientific communication and trade within the West are as important to maintaining Western technology lead as is controlling the flow of technology to the Soviet bloc, U.S. policy should lend equal emphasis to both objectives.

3. **The CoCom countries should take specific steps to bolster the efficiency and effectiveness of multilateral controls.**

Among the most important issues now facing CoCom are: (a) reduction in the overall scope of the list, (b) modification of the procedures for decontrolling items from the International List of dual use items, and (c) provision of greater transparency in CoCom decision making.

4. **The CoCom process would benefit if all country delegations had balanced economic and defense representation.**

The U.S. delegation to CoCom, unlike those of other member nations, includes a significant contingent of defense officials. A balance of economic and defense representation on all CoCom delegations would enhance CoCom unity and the usefulness of the CoCom process, in part by helping to resolve conflicts between competing economic and military objectives.

5. **Foreign perceptions of U.S. commercial advantage derived from export controls impede multilateral cooperation.**

There is a widely held view in Europe and the Far East that the United States uses its national security export controls to afford commercial advantage to U.S. companies. Although the panel found no substantive evidence to support this view, the existence of these perceptions makes it difficult to gain effective multilateral cooperation.

6. **Unilateral controls are of limited efficacy and may undermine allied cooperation.**

The imposition by the United States of unilateral national security export controls for dual use items can be justified only as a stopgap measure pending negotiations for the imposition of multilateral controls or in rare cases in which critical national security concerns are at stake requiring unilateral restrictions. It must be recognized that, except when used as a temporary measure, the application of unilateral controls undermines the incentive of the allies to develop a sound basis for multilateral restriction.

VII. ADMINISTRATION OF U.S. NATIONAL SECURITY EXPORT CONTROL POLICIES AND PROCEDURES

1. **The lack of high-level oversight and direction degrades the effectiveness of U.S. controls.**

The administrative structures established by the executive branch have not proven effective in resolving the frequent policy differences among the three principal line agencies (the Departments of State, Defense, and Commerce). The White House has intervened only intermittently and then primarily to contain interagency conflict rather than to provide adequate policy direction. The lack of higher-level oversight and direction results in duplication of effort, uncertain lines of authority, serious delays in decision making, and underutilization of information-sharing capacity.

2. **Unequal effort by and resources of the three principal line agencies have led to conflict, confusion, and unbalanced policy.**

DoD's determined efforts to reinvigorate the national security export control regime have been useful in raising the general level of awareness in the United States and in other CoCom countries. But this increasingly active DoD role also has led to an imbalance in the distribution of government effort and resources. Although DoD has created a new dedicated agency for technology security, neither the Department of Commerce nor the Department of State has been able to implement equally effective measures. The result is a lack of balance in the interagency policy formulation process and an inefficient licensing process.

3. **Shifts in responsibility within the line agencies may preclude broadly informed and balanced policy judgments.**

Reorganization initiatives in a number of the principal line agencies tasked with managing export controls have resulted in a shift of responsibility away from organizations with expertise in technology development and international trade and toward those whose principal and often only concern is technology control. Although there have been positive effects of this shift in responsibility, there has been a loss of sustained technical input into the policy process for national security export controls.

4. **Current licensing requirements, classification procedures, and proprietary controls for technical data are both appropriate and adequate.**

Although technical data that are not publicly available require a validated license for export to the Soviet bloc, data exports to other destinations for the most part are eligible for a general license. The need for the unhindered exchange of large volumes of data in international commerce and research indicates that a strict system of control is neither feasible nor desirable. Existing licensing requirements, classification procedures, and proprietary controls offer sufficient protection.

5. **Controls on unclassified DoD technical data have a chilling effect on the U.S. R&D community and should be imposed sparingly.**

   The Department of Defense Authorization Act (DAA) of 1984 permits DoD to impose restrictions on domestic dissemination or export of DoD-funded or DoD-generated technical data whose export would otherwise require a validated license under EAR or ITAR. Such restrictions have the effect of creating de facto a new category of unclassified but restricted information. These new, more comprehensive technical data restrictions have had a chilling effect on some professional scientific and engineering societies that have elected voluntarily to close certain sessions. It is the panel's judgment that imposing controls on technical data that are broader than those now in effect is not warranted by the demonstrable national security benefits.

6. **The congressional mandate for integrating the Militarily Critical Technologies List (MCTL) into the Commerce Department Control List practically cannot be accomplished.**

   The MCTL has been used inappropriately as a control list, and its annual revision has resulted in a voluminous itemization of many important technologies without apparent prioritization. Because the Departments of Defense and Commerce maintain fundamentally different objectives in their list development exercises, the congressionally mandated task of integrating the MCTL into the Commerce Department's control list practically cannot be accomplished.

7. **The complexity of U.S. export controls discourages compliance.**

   The complexity of U.S. controls discourages compliance, especially by foreign firms and small- to medium-sized U.S. companies. For example, the Export Administration Regulations constitute nearly 600 pages of rules and procedures. These could be reduced and simplified substantially—and made more "user friendly."

8. **There is a need for high-level industry input in the formulation of national security export control policy.**

   There is a need for an effective mechanism within the government to provide meaningful input from the private sector on the formulation of a coordinated national security export control policy. Such a group must be constituted at sufficiently high corporate levels to reflect major industry concerns, and it must be able to have an impact on the actual policy process.

9. **Voluntary cooperation from industry is important to the enforcement of export controls.**

   Voluntary cooperation by U.S. industry—particularly companies with overseas subsidiaries—is important to export control enforcement, especially in the identification of violations. Companies frequently have knowledge otherwise unavailable to the government of possible violations by other firms.

10. **Adequate information to evaluate the impact of national security export controls is not maintained by the U.S. government.**

    This study has revealed serious shortcomings in both the quality and quantity of information maintained and analyzed by the U.S. government on the coverage, operation, and domestic and global impacts of national security export controls. In the absence of better information, it will continue to be difficult for policymakers to arrive at more informed and balanced judgments as to the advisability of controls.

11. **A comprehensive cost/benefit analysis of controls currently is infeasible.**

    Despite some preliminary efforts to assess the competitive effects of national security export controls, a *comprehensive* empirical analysis of the costs and benefits is precluded by the lack of data, by the complexity of the system, and by a variety of qualitative judgments that must enter into any evaluation.

There is little doubt that, without the heightened attention to these issues initiated in the early years of the current administration by DoD, the problem of Western technology diversion to the Soviet Union would by now be considerably worse. But the panel is concerned that this policy "correction"—useful and necessary as it was—should not now overshoot the mark. The panel wishes to reiterate therefore its concern about the continuing lack of balance within the policy process for national security export controls regarding the representation of technical, national security, economic, and domestic and international political interests. This balance should be developed and maintained within each agency, among agencies of the U.S. government, and among countries participating in CoCom.

PRINCIPAL RECOMMENDATIONS OF THE PANEL

The panel makes two basic recommendations, together with a series of corollary prescriptions.

I. STRENGTHEN THE COCOM MECHANISM

The panel recommends that the United States take the lead in further strengthening the CoCom mechanism so that it can function as the linchpin of a fully multilateral national security export control regime for dual use technologies. Under current and prospective global circumstances, such a multinational system is essential to achieve maximum export control effectiveness without impairing Western economic vitality. To strengthen the current multilateral control regime will require greater harmonization of the current U.S. approach and those of our technologically advanced allies through closer consultation and the adoption of policies that promote cooperation. The two most immediate objectives are: (1) to limit the coverage of the U.S. Control List and the CoCom International List to those items whose acquisition would significantly enhance Soviet bloc military capabilities and that are feasible to control, and (2) to obtain agreement on a common approach to reexports of CoCom-origin items.

The United States should strive to create a community of common controls in dual use technology—that is, a set of trade relationships unimpeded by national security restrictions—among those Free World nations that share an expressed willingness to adhere to common or equivalent export control restraints on the transfer of strategic and controllable goods and technologies to the Soviet Union and its Warsaw Pact allies. Accordingly, the panel recommends the following changes in U.S. policy.

1. **Control Only CoCom-Proscribed Items**
   As a general policy, the United States should seek to control only the export of CoCom-proscribed items and then only when they are destined for a proscribed country or for a non-CoCom Free World country that has not entered into an agreement* to protect CoCom-proscribed technology.
2. **Within CoCom, Seek Control on Exports to Third Countries**
   With respect to CoCom, the United States should negotiate agreements with member countries regarding control of exports and reexports from their territories to third (i.e., Free World non-CoCom) countries, thereby obviating the need for U.S. reexport authorizations. For those CoCom countries with which agreement on the control of exports to third countries can be achieved, the requirement to obtain validated licenses should be eliminated—*except* for the export of extremely sensitive high-level technology (e.g., supercomputers). For those CoCom countries unwilling to agree to or unable to implement such controls, the present system of validated licenses should be retained.
3. **Negotiate Comprehensive Understandings with Third Countries**
   With respect to non-CoCom Free World countries, the United States should, in coordination with other members of CoCom, negotiate *comprehensive* understandings—or equally effective informal arrangements considered acceptable by the Department of State—that specify controls on the export of all CoCom-proscribed goods and technology (including those produced indigenously) to the Warsaw Pact countries or to other noncooperating third countries. A graduated scheme of incentives should be developed for non-CoCom Free World countries that agree to less than comprehensive controls. Those third countries that have agreed to comprehensive arrangements should be accorded full "CoCom-like" treatment; that is, they should not be subject to U.S.-validated license or reexport authorizations as soon as they can demonstrate their ability and willingness to enforce the control agreement.
4. **Remove Items Whose Control Is No Longer Feasible**
   Regardless of the rate of progress on CoCom and third country negotiations, the United States should actively seek to remove from both the U.S. Control List and the CoCom International List items whose control is no longer feasible because of their widespread production, distribution, and sale throughout the world. (See also Item II.4 on p. 27.)
5. **Maintain Unilateral Controls Only on a Temporary Basis or for Limited, Unique National Security Circumstances**
   Regardless of the rate of progress on CoCom and third country negotiations, the United States should eliminate the use of unilateral national security export controls *except* in those circumstances in which active efforts are under way to negotiate multilateral controls within and outside of CoCom—in which case unilateral controls could be maintained on a temporary basis—*or* in those situations in which unique national security circumstances warrant the imposition of such controls for limited periods of time. The panel wishes to emphasize, however, that the phrase "unique national security circumstances" does not justify retaining the present U.S. unilateral Control List. Rather, the panel recommends that controls be estab-

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*Such an agreement might be implemented either through a formal memorandum of understanding or an informal arrangement that achieves the same result.

lished on a multilateral basis. In the *rare* case in which a CoCom country may believe that critical national security concerns are at stake, it may wish to reserve the right to establish a unilateral restriction on its domestic industry. This exception should be used sparingly.

6. **Eliminate Reexport Authorization Requirements in Countries Participating in a Community of Common Export Controls on Dual Use Technology**

   To further the objective of developing a community of common controls on dual use technology among cooperating countries of the Free World and to encourage international cooperation and trust, the United States should eliminate any requirement that a buyer must seek authorization for a reexport that is subject to CoCom or "CoCom-like" controls by the country initially exporting the product or technology. For effective enforcement, reliance should be placed instead on the cooperating governments.

7. **Maintain Current Control Procedures on the Transfer Within CoCom of Sensitive Information, Technical Data, and Know-how**

   The United States should continue to rely on current security classification procedures and the protection afforded by general license GTDR (technical data restricted) or by proprietary interests to control the transfer within CoCom of information, technical data, and know-how that are considered militarily important.

8. **Reduce the Scope of the CoCom List and Modify CoCom Decision-Making Policies and Procedures**

   There are a number of steps that the United States—together with its CoCom allies—should take to improve the efficiency and effectiveness of the multilateral process. The most important of these are to reduce the overall scope of the CoCom International List to improve credibility and enforcement and to add a 4-year "sunset provision" that would cause the automatic removal (unless they were periodically rejustified) of lower-level CoCom items.

9. **Maintain a Clear Separation Between National Security and Foreign Policy Export Controls**

   Existing statutory authority describes separate systems and procedures for the control of exports for foreign policy versus national security reasons. Therefore, because many of our CoCom allies continue to disagree profoundly with some unilateral U.S. foreign policy trade sanctions, the U.S. government should maintain the clearest possible distinction between the administration of national security and foreign policy controls.

II. ACCORD GREATER IMPORTANCE IN U.S. NATIONAL SECURITY EXPORT CONTROL DECISIONS TO MAINTAINING U.S. TECHNOLOGICAL STRENGTH, ECONOMIC VITALITY, AND ALLIED UNITY

The panel recommends that executive branch decisions concerning national security export controls accord greater importance than they currently do to maintaining U.S. technological strength, economic vigor, and allied unity. Ultimately, an effective multilateral national security export control regime can be established only through the commitment and support of the President and Congress. Nevertheless, the decision-making and advisory mechanisms of government also must be constituted and tasked appropriately to facilitate the effective implementation of the policy approach proposed above. To this end, the panel recommends the following specific changes in U.S. policy and procedures.

1. **Balance the Protection of Military Security with the Promotion of National Economic Vitality Through Affirmative Policy Direction**

   The President should require that the National Security Council (NSC) implement the *existing* policy mandate (as set forth in the Export Administration Act of 1979, as amended), which calls for both the protection of military security and the promotion of national economic interests. NSC should provide *regular*, affirmative policy direction to the responsible line agencies, a recommendation that can be accomplished by staffing the NSC properly to deal with these matters and by assigning a senior NSC staff member specific responsibility for bringing agency representatives together to resolve policy differences. The panel further recommends that the secretaries of commerce and treasury participate in NSC meetings at which export control matters are to be addressed.

2. **Provide Sufficient Resources and Authority to the Departments of Commerce and State to Allow Them to Fulfill Their Roles in the Export Control Process**

   To establish a more balanced policymaking process within the federal government, the Departments of Commerce and State should be allocated sufficient resources dedicated to the implementation of national security export controls. In particular the Commerce Department should upgrade significantly the capacity and sophistication of its automated systems and the quality of its in-house technical and analytic expertise. It is also essential that the State Department vigorously exercise its traditional role of ensuring that the U.S. government speaks with a single, coherent voice when dealing with foreign governments and foreign firms on these matters.

3. **Restore Technical Judgment and Overall Balance to the National Security Export Licensing Process**
   The locus of responsibility and decision making within DoD has shifted from the office responsible for research and engineering to the office responsible for policy. As a result, there has been a significant reduction in the weight accorded to technical factors and a resultant imbalance in the policy process. It should now be the goal therefore to reestablish a major role for the technical side of DoD and to reduce the DoD role in detailed license review as parallel steps are taken within the Commerce Department to further strengthen its licensing procedures.
4. **Implement the Decontrol Procedures Required by Law When Foreign Availability is Found to Exist**
   The lack of action by the federal government on foreign availability determinations is contrary to the mandate of the Export Administration Act of 1979, as amended. This is due in part to the fact that no specific time lines for the completion of foreign availability determinations have been specified in legislation. At the very least the Export Administration Act should impose reasonable time lines on *all* responsible agencies. Because the process for determining foreign availability is not now functioning effectively, there is a need for effective remedial action by both the executive and legislative branches.
5. **Withdraw the Statutory Requirement to Integrate the MCTL into the Commerce Department's Control List**
   Congress should withdraw the statutory requirement for the integration of the Militarily Critical Technologies List into the U.S. Control List. The fundamentally different nature and functions of the two lists—the former an exhaustive list of all technologies with military utility and the latter a specific list of items requiring an export license—make this goal unattainable.
6. **Provide Effective, Two-Way Communication at the Highest Levels Between Government and the Private Sector**
   A mechanism should be established (or upgraded) to provide effective, two-way communication between the highest levels of government and of the private sector on the formulation and implementation of coordinated national policies that balance military security and economic vitality. To this end the panel recommends that senior policy staff of the Executive Office of the President meet periodically with the President's Export Council and/or other respected representatives of the private sector and inform the President of the concerns of this sector regarding the domestic and international commercial impacts of national security export controls. It may be necessary for Congress to establish a mechanism to ensure appropriate consideration of industrial concerns in the formulation of national security export control policy.

We will also hear today about Administration proposals to further streamline the export control system. While some of these ideas are sound, my concern is that what appear to be marginal changes, in fact reopen the entire debate on the basic structure of the system that we settled so painfully in 1985. The Administration proposes to alter the delicate balance between national security and commercial interests, by giving Commerce greater control over export control decisions.

My view has always been that the most effective and efficient mode for making these decisions would be an independent export control agency. As it is, we have chosen a "second best" solution and we have to deal with the tension inherent in a process of interagency consensus. That process is working. Defense does deny some license requests but that is their job. If every license request sailed through the process, our national security would be placed at risk and we would have a real crisis on our hands.

I believe the system will become even more effective when Commerce reorganizes functions later this year to create the position of Under-secretary of Commerce for Export Administration. Only when export administration assumes its full status within the Department as mandated by law can we fully evaluate the effectiveness of the system. Any attempt to shift the "balance of power" before that time raises serious concern for me.

Despite my reservations with some Administration proposals, I welcome Secretary Baldrige's thoughts on how the system can be improved. I have my own thoughts on improvements that are needed in the area of financial controls and look forward to full consideration of that issue by the Administration and my colleagues in the coming debate on export controls.

Thank you. Mr. Chairman.

Secretary **Derwinski**. Thank you, Mr. Chairman. There are two principles which must, in the view of the Reagan administration, guide our export control policy.

First, we must continue to exert a vigorous effort to keep militarily significant equipment and technologies out of the hands of our adversaries.

Second, we must do so while minimizing the burden of our regulatory and licensing activities upon the private sector.

It is a fact of life that effective export control regimes require multilateral cooperation since the substantial U.S. monopoly of militarily significant technologies has been over for some time.

We have been collaborating effectively with our NATO allies and with Japan for many years in CoCom. At this point, Mr. Chairman, may I digress from my statement to note that one of my first duties as Acting Under Secretary was to head the U.S. delegation to a high level CoCom meeting late in January, where we did have, in my judgment, very effective cooperation between the various departments and agencies of our Government.

I think it bodes well for the kind of cooperation that we will have within the executive branch to implement whatever legislation finally emerges from the Congress.

We should also add, Mr. Chairman, that we look forward to further high level meetings with CoCom to hammer out the kind of agreements and working relationships with our allies that still occasionally eludes us.

And while I recognize that there are always political peculiarities in any given country that affect the policies at any given time, I think, overall, we've reached a point where we can legitimately expect greater cooperation from the CoCom members.

The other point I'd like to make, Mr. Chairman, is that the issue, as I see it, in very simple terms, is that one of the needs we must logically pursue is to stimulate exports.

Therefore, the basic goal that we have, which is a shorter list but much more effective implementation and control of that list is I think a good tradeoff, and that was the basic approach that we tried to use at our meeting late in January.

At this point, Mr. Chairman, I would just thank you for your courtesy and turn the meeting over to Mr. Perle and then subsequently wait for your questions.

[The complete statement Edward J. Derwinski follows:]

STATEMENT BY EDWARD J. DERWINSKI
COUNSELOR OF THE DEPARTMENT OF STATE
BEFORE THE SENATE SUBCOMMITTEE
ON INTERNATIONAL FINANCE AND MONETARY POLICY
MARCH 12, 1987

Mr. Chairman:

I will be sworn in as Under Secretary for Security Assistance, Science and Technology on March 24. In the interim, as Counselor of the Department, I have begun to take an active interest in the various matters that comprise my new portfolio. Of these one of the most challenging is the technology transfer issue. I was struck by a comment by General Lew Allen, Jr. in his preface to the recently released National Academy of Sciences study on National Security Export Controls. He said that he found the problem of balancing a concern for the health of US high technology industries with the need to maintain controls on high technology export "to be extraordinarily complex and initially difficult to grasp in its totality." Amen.

The subject before us is important and challenging. We should approach it in an orderly fashion, and bear in mind the need to craft policies in foreign affairs that have the support of the Congress and can thus be sustained.

There are two principles which must in the view of the Reagan Administration, guide our export control policy:

First, we must continue to exert a vigorous effort to keep militarily significant equipment and technologies out of the hands of our adversaries; and

Second, we must do so while minimizing the burden of our regulatory and licensing activities upon the private sector.

The management of our export policies must be based upon a full concern for both principles, and there is no reason that such an approach cannot be effectively managed.

These are the goals that we pursue in this area. I have also learned some of the basic facts of life regarding this pursuit in my brief exposure to the subject.

The first fact of life is that an effective export control regime requires multilateral cooperation. The days of substantial US monopoly of militarily significant technologies have been over for some time. We have been collaborating effectively with our NATO allies and with Japan for many years in COCOM.

What is new, however, in this regard is the need increasingly to go beyond COCOM in our efforts. This is necessary in part because newly industrializing countries are becoming increasing consumers, and indeed producers, of COCOM controlled technologies. We need to concern ourselves with the problem of subsequent diversion to proscribed destinations.

All of this constitutes a large, complex, and growing requirement for diplomacy. Thus we in the administration, the State Department in particular, must prove effective in this regard.

The new elements in the technology transfer picture which I have just referred to are also symbolic of a second important fact of life -- the rapid rate of technological change. This challenges us on the one hand to keep up with the emergence of

new technologies with important military applications, and on the other to pay attention to decontrolling those technologies which change has made significantly less-militarily relevant to US and to our allies.

The former objective seems to get more attention and more press coverage, but we must do better on the latter objective as well, if we are to be true to both basic principles which underpin our export control policy.

The third fact of life I have encountered in my short exposure to this portfolio is that increasingly it is the civilian sector which produces militarily important technologies. This complicates our life dramatically, as compared to earlier times when the military leading edge was generally a result of direct defense investments as technologies which had no significant civilian uses. Regulating -- that is, restricting the export of -- something invented in the civilian private sector and which has substantial civilian uses is not something taken lightly by this administration nor should it be taken lightly by any administration.

WE MUST ASK OURSELVES WHAT IMPACT THE COCOM SYSTEM IS HAVING ON THE SOVIET BLOC. TO ANSWER THAT QUESTION, EVEN IN GENERAL TERMS, I FOUND THAT YOU HAVE TO CONSIDER THE TWO FACETS OF THE COCOM SYSTEM -- LEGAL SALES AND ILLEGAL ACQUISITIONS -- SEPARATELY. MY BELIEF IS THAT OUR GREATEST IMPACT IS IN THE AREA OF LEGAL SALES AND, WITHIN THAT DOMAIN, IN PREVENTING THE SALE OF MANUFACTURING SYSTEMS FOR CONTROLLED PRODUCTS.

WE HAVE MADE IT MUCH HARDER FOR THE SOVIETS TO ACQUIRE MANUFACTURING SYSTEMS AND THIS AREA IS A REAL ACCOMPLISHMENT. SIGNIFICANT IMPACT IN THE AREA OF MANUFACTURING SYSTEMS IS VALUABLE BECAUSE IT DENIES THE SOVIETS THE ABILITY TO PRODUCE, WITH OUR EQUIPMENT, CONTROLLED ITEMS OF BETTER QUALITY THAN THEY OTHERWISE COULD IN LARGE QUANTITIES. PRODUCTION OF LARGE VOLUMES OF CONTROLLED ITEMS WOULD BE MUCH EASIER FOR THE SOVIETS THAN ACQUIRING THEM LOT BY LOT, VIA DIVERSION.

THE REASON FOR COCOM'S SUCCESS IS STRAIGHTFORWARD. SUCH SYSTEMS ARE VERY HARD TO ACQUIRE EXCEPT THROUGH LEGAL MEANS. ILLEGAL ACQUISITION OF LARGE AMOUNTS OF PRECISELY INTERRELATED EQUIPMENT, TECHNICAL DATA, AND FINALLY THE KNOW-HOW TO ACTUALLY OPERATE AND MAINTAIN SUCH SYSTEMS, IS ALMOST IMPOSSIBLE TO ACCOMPLISH COVERTLY.

TURNING TO ILLEGAL ACQUISITIONS, OUR VIEW IS THAT WE AND OUR COCOM PARTNERS HAVE BEEN FAR LESS EFFECTIVE IN THIS AREA. THE SOVIETS HAVE EXPANDED THEIR INVOLVEMENT IN ILLEGAL TRADE ENORMOUSLY OVER THE LAST FIFTEEN YEARS. WE HAVE BEEN SLOW TO RESPOND TO THIS CHANGE ON THEIR PART.

DISCUSSIONS HAVE BEEN HELD AND AGREEMENTS REACHED IN COCOM. YET CLEARLY THE ABILITY AND RESPONSIBILITY TO REDUCE ILLEGAL TRADE LIES ESSENTIALLY WITH NATIONAL AUTHORITIES ACTING UNDER NATIONAL LAWS AND REGULATIONS. THE COMMITMENT TO ATTACK THE PROBLEM, THE RESOURCES ASSIGNED TO IT, AND OVERALL EFFECTIVENESS CLEARLY VARIES AMONG MEMBER STATES. WE ARE WORKING TO BUILD A BETTER CONSENSUS AMONG OUR PARTNERS.

OVER THE LONGER-TERM, WE AND OUR ALLIES FACE A COLLECTIVE PROBLEM. MORE AND MORE COUNTRIES CAN NOW, OR WILL IN TIME BE ABLE TO, NEGATE OUR EFFORTS IN COCOM AS THEIR TECHNOLOGICAL CAPABILITIES INCREASE AND TO THE EXTENT THAT THEY DO NOT EFFECTIVELY PROTECT THE STRATEGIC GOODS THEY PURCHASE FROM COCOM MEMBERS FROM RE-EXPORT OR DIVERSION. TECHNOLOGICAL CAPABILITY IS SPREADING FASTER THAN WE ARE MOVING. WE MUST ENLIST THE COOPERATION OF THESE FRIENDLY, NON-COCOM COUNTRIES. THE LONG-TERM THREAT TO THE VIABILITY OF COCOM EMINATES NOT FROM WITHIN BUT FROM WITHOUT.

IN LIGHT OF THE PROBLEMS, THE CONCLUSIONS REACHED BY THE HIGH LEVEL MEETING WERE VERY PROMISING. THERE WAS GENERAL AGREEMENT THAT SPECIAL PRIORITY SHOULD BE GIVEN TO STREAMLINING THE LISTS, TO IMPROVING ENFORCEMENT AND HARMONIZATION OF NATIONAL EXPORT CONTROL SYSTEMS AND TO THIRD COUNTRY COOPERATION.

WE WILL BE WORKING IN COCOM HAVING LAID OUT A WORK PROGRAM DESIGNED TO IMPROVE COCOM PERFORMANCE. THIS PROGRAM WILL INVOLVE KEY ELEMENTS OF OUR OWN GOVERNMENT AS WELL AS OUR COCOM PARTNERS IN A SERIES OF MEETINGS WHICH WILL ATTEMPT TO IMPROVE THE ENTIRE SYSTEM. MORE INTENSE HIGH LEVEL MEMBER GOVERNMENT ATTENTION TO PROBLEM AREAS IS AN IMPORTANT PART OF THIS EFFORT.

THE SECOND MAJOR TASK IS TO RESPOND TO PRESIDENT REAGAN'S INSTRUCTION THAT THE ENTIRE ISSUE OF NATIONAL AND MULTINATIONAL STRATEGIC EXPORT CONTROLS BE REVISITED BY THE CABINET. WE HAVE UNDERTAKEN THIS INTERAGENCY EFFORT IN THE SPIRIT OF THE PRESIDENT'S "QUEST FOR EXCELLENCE" INITIATIVE AND HIS LEGISLATIVE PACKAGE. THE CHARTER ASKS THE MEMBERS OF THIS ADMINISTRATION TO LOOK FOR WAYS TO INCREASE US COMPETITIVENESS, TO SPUR US EXPORTS, TO INCREASE EMPLOYMENT, AND TO CONTRIBUTE TO THE HEALTH OF US INDUSTRY WHILE TAKING CARE TO PROTECT VITAL SECURITY INTERESTS.

THE RECENT INTER-AGENCY REVIEW CHALLENGED US TO DEVELOP AN APPROACH TO NATIONAL AND MULTILATERAL EXPORT CONTROLS THAT WILL (A) EFFECTIVELY CURB DIVERSION OF SOPHISTICATED MANUFACTURING, COMPUTER, AND OTHER SENSITIVE TECHNOLOGIES, BUT (B) PROVIDE OPPORTUNITIES FOR GROWTH AND DEVELOPMENT OF KEY SECTORS IMPORTANT TO OUR LONG-TERM ECONOMIC GROWTH.

CONTROLS HAVE AN INHERENT ADVERSE IMPACT ON THE COMPETITIVENESS OF US INDUSTRY. MOREOVER, TO THE EXTENT THAT OUR INDUSTRY IS MORE ADVANCED THAN THAT OF OTHER WESTERN COUNTRIES, THE COST TO OUR ECONOMY MAY BE PROPORTIONALLY HIGHER THAN THAT BORNE BY OTHERS, AND TO THE EXTENT THAT OUR PROCEDURES ARE MORE TIME-CONSUMING, MORE UNCERTAIN OR MORE STRICT THAN THOSE FACED BY FOREIGN FIRMS, IT IS EVEN HIGHER.

THE GENERAL SOLUTION TO MAKING CONTROLS EFFECTIVE AND REDUCING THE BURDEN THEY PLACE ON OUR COMPETITIVENESS IS CLEAR. WE AND OUR ALLIES SHOULD CONTROL LESS IN ORDER TO CONTROL BETTER. ALTHOUGH SOME PRODUCTS CAN BE PROPOSED FOR COCOM DECONTROL NOW, REACHING THE LONG-TERM OBJECTIVE WILL REQUIRE BOTH TIME AND CARE. MORE ATTENTION TO CONTROLLING TECHNICAL DATA, AS OPPOSED TO PRODUCTS, MAY BE PART OF THE ANSWER.

It is also possible to address the "competitiveness" issues from another, perhaps more promising, angle in the short run. Our aim should be to reduce the licensing burden on our companies.

To return to the point I made at the outset, we need to devise policies which are sustainable over the long term. That requires not only renewed efforts within the Administration but also, greater collaboration with the Congress. Thank you.

Senator SARBANES. Mr. Perle.

STATEMENT OF RICHARD PERLE, ASSISTANT SECRETARY OF DEFENSE FOR INTERNATIONAL SECURITY POLICY

Secretary PERLE. Thank you, Mr. Chairman. I would like to first thank you for taking the time to chair this meeting. It's symptomatic of this issue, if I may say so, that it's difficult to get members to come to hearings on this subject, on what seems a technical subject bogged down in detail.

I know that members of this committee and other committees are constantly bombarded by representatives of the business community who would like to sweep away the control system. So we welcome the opportunity to explain why in our view it's necessary to have a balance between public and private interests, and in particular a balance between our national security and our trade interests.

I think it is clear that elicit trade in high technology is a serious threat to Western security. The U.S. Government's 1985 report, entitled, "Soviet Acquisition of Militarily Significant Western Technology, An Update," confirmed that there is a systematic, well-organized Soviet program for obtaining sophisticated manufacturing—computer and other sensitive technologies—from the West.

Recent intelligence reports show that more than 5,000 Soviet military projects are benefiting from purloined Western technology and the number appears to be growing.

This threat is particularly worrisome because a substantial lead in key technologies is essential if the West is to offset the Soviet quantitative military advantage.

LOSS OF TECHNOLOGY TO THE SOVIET UNION

When this administration came to office 6 years ago, we were faced with a growing loss of technology to the Soviet Union at a time when we'd only begun our effort to rebuild America's military strength. A costly effort.

We determined that this situation had to change and we redoubled U.S. efforts to prevent Soviet theft and purchases of our advanced technology.

I believe those efforts have paid off. We now have in place an export control process which renders it far more difficult for the Soviets to buy or steal our technology.

We now intend to consolidate our efforts with initiatives at home and abroad to regulate strategic trade in a way that defends our security, reduces administrative burdens, promotes real competitiveness in world trade and strengthens enforcement of international export controls.

The President has directed the Cabinet to provide recommendations both to maintain the strength of America's high technology industries and to ensure that our control system encourages exports without sacrificing national security.

The Department of Defense fully supports this initiative. I will remind you of remarks by Secretary Weinberger not long ago, in February, to the Foreign Affairs Committee.

He said it was important to preserve the technological lead that we have at the moment—by a small margin—even though we perhaps don't make as many sales as we could.

With regard to legislative or administrative changes, the Secretary said, and I quote:

> I would want to be sure that the controls and any changes we recommended were such that these considerations could receive a very careful examination and that, in the final analysis, if it came down to a question of whether we could make another sale or whether we were hurting the security of this country, that the latter view would prevail.

I propose, Mr. Chairman, that that is the appropriate criterion to informed administration decisionmaking. And I would hope the legislative branch, as it considers the legal structure, would that also.

When this administration assumed office in 1981, we inherited an administration structure for export controls that was antiquated and ineffective.

Decisions on licenses were often subject to disabling delay. Decisions were sometimes capricious. We, in the Department of Defense, have moved to remedy a situation that denied our exporters the quick and certain decisions that they had a right to expect from their government.

We have added personnel, computerized our activities and assisted in encouraging fair and consistent enforcement and administration of the embargoing which we and our allies participate.

With the cooperation of the Congress, we can go further in effecting a control regime that will ensure that American exporters are not placed at a competitive disadvantage.

This will require adequate attention, energy and resources and a will on the part of all parties, government and private, to meet our twin objectives of protecting national security while encouraging exports that are not inimical to it.

Mr. Chairman, I hope that we will not, in asserting the need to enhance American competitiveness—and that's this year's buzzword—that we will not dismantle the controls that protect our nation. The costs to the Free world of carelessness in administering trade controls would be intolerably high.

When the Soviets incorporate Western technology in their own military programs, we must spend more on our own defense, often vastly more. And, frequently, the trade benefits are miniscule in relation to the investment in defense that they force upon us.

At the same time, the administration bill meets the need to make U.S. exports more competitive and the export control process less restrictive without compromising national security.

Changes to the export control process will be announced by the administration at the conclusion of an NSC chaired interagency review in progress.

RESPONSIBILITY OF DEPARTMENT OF COMMERCE

I would add only one concluding point. The principal responsibility for the administration of a system of export controls of this country lies with the Department of Commerce. They have it entirely within their capacity to modernize in the way the Defense Department has modernized, to bring to bear automated data processing, to hire the personnel necessary to give our exporters a quick and consistent judgment on whether they should be permitted to export or not.

There is a machinery and it has a product. And the product in this case is an export license. And if the machinery isn't working well enough, then we ought to fix it. But it would be a great mistake to abandon the machinery.

And I would very much hope that this committee would consider ways in which additional resources might be made available to the Department of Commerce so they could acquire the personnel and the administrative support necessary to give exporters expeditious and consistent, noncapricious products.

That is, an export license when it is safe to do so, and a clear and rapid denial when our national security requires that.

I don't know that they'll ask you for more funds because they have their own problems. They have an internal Commerce Department budget. If I can kibbitz as an outsider, shift some money around so that they can do the job. And they can do the job we have a right to expect.

[The complete prepared statement of Richard N. Perle follows:]

Senator **Sarbanes**. Thank you, gentlemen, very much.

First of all, let me ask whether the proposals submitted by the administration to the Congress have your support?

Mr. **Perle**. They do.

Senator **Sarbanes**. Both the legislative—what about the proposed part of the package that is a change in regulations as opposed to the legislative proposals?

Mr. **Perle**. I think we had better be clear about exactly what we are talking about. We support the legislation that has been sent forward. It is the bill that in the House was introduced by Congressman Michel. I imagine it has been introduced here.

On behalf of the administration, I am not prepared to go beyond that in general, but I will be glad to respond to specifics.

There are some areas in which the Commerce Department, confident that it has a legal authority to do so, would settle issues that are presently under discussion within the administration. I would hope and trust that they will be bound, as I feel I am bound, to reach a coordinated position within the administration before expressing a private preference.

AUTHORITY OF DEPARTMENT OF COMMERCE

Senator **Sarbanes**. The Secretary of Commerce was asked this morning whether in fact they did not now have the authority to do at least some of the things for which they are seeking legislation.

Do you have a view on that? Do either of you have a view on that question?

Mr. **Perle**. I think it is an important question. Obviously, if the authority already exists, it would be pointless to legislate.

I assume Secretary Baldrige had a clear answer for that. He knows the limits of his own authority better than I do.

Mr. **Derwinski**. My understanding, Mr. Chairman, is that the position as expressed by Secretary Baldrige is the administration position. He does have that authority.

Mr. **Perle**. What position are you referring to when you say that, so I will be sure I know?

Mr. **Derwinski**. I am referring to the Chairman's question.

Senator **Sarbanes**. You are referring to the first question?

Mr. **Derwinski**. Yes.

Senator **Sarbanes**. What about this last question as to whether in effect they are seeking legislative authority to do things that they could do now under existing authority?

Mr. **Derwinski**. In part, that was, I think, a logical decision to work with the Congress. In this area we think there can be a great deal of bipartisan interest and bipartisan cooperation.

Senator **Sarbanes**. So you are in effect saying they may have the authority but they are simply seeking it again, is that it, to get a congressional concurrence in what they are seeking to do?

Mr. **Derwinski**. My understanding is that it was one of the factors in that decision, yes.

Senator **Sarbanes**. Now, a question was put to the Secretary this morning about the re-exporting without prior approval, depending on the percentage of U.S. content.

Do either of you have a view on that issue?

Mr. **Perle**. I do.

Senator **Sarbanes**. As I understand the current proposal, it is to be dealt with by regulation under the administration's current approach. But in case it should be sought to deal with it statutorily, I think we ought to get your views on that issue on the record.

Mr. **Perle**. I think it is a grave mistake to free from the kind of scrutiny that is necessary where sensitive technologies are involved, to choose arbitrary dollar figures and exempt transactions that fall short of that figure from careful deliberation.

Either the items were worth controlling or they shouldn't be controlled. To say that if an item that might otherwise be controlled constitutes less than a certain value, in that case we are not going to exert the same kind of control over it that we would if it were a separate transaction, not embedded in a larger transaction, I think that does not make much sense, and I don't know how you define the transactions.

Senator **Sarbanes**. There is a de minimis standard now, isn't there?

Mr. **Perle**. There is a way in which we treat certain embedded technologies; that is, if you have a medical instrument that happens to include a microprocessor which could not by itself be shipped, you are talking about a million dollar piece of equipment and a $5,000 microprocessor, then we are trying to strike an appropriate balance. You don't interfere with that kind of a shipment. It would be unwise to interfere with that sort of a shipment.

But what I believe is entailed here is something quite different, and the administration of it would be extraordinarily difficult.

Suppose, for example, a package is put together that is a $100 million package and $20 million in value terms of that package is extremely sensitive technology that we would not want to go into the Soviet Union because it will have an immediate impact on their military capability and burden our defense budget. Should we let that go because there is another $80 million in the package that is perfectly OK?

I think we want to make case-by-case judgments. So I would be opposed to any meat ax approach to dealing with the burden of these regulations.

The way, in my judgment, to deal with the complaints of the business community is to make the system work, and the Commerce Department has all the authority it needs in a statutory sense to put in the time, effort, personnel, and energy and commitment to make that system work. They should get on with it and do it.

Senator **Sarbanes**. I take it you would say, though, that if something were done, even though the figures are arbitrary, from your point of view the lower the figure the better. That doesn't agree with the way you think the judgment should be made, but if something is done with figures, the lower the better.

Would that be the case?

Mr. **Perle**. Yes, clearly, but I think there are terrible definitional problems that invite abuse, and it seems to me it doesn't solve a significant enough problem to justify that. I would much rather see license delivered predictably and reliably because we do it right.

When we came in in 1981, over 100,000 licenses a year in the Department of Commerce were being handled card up. There is no company in this country that handles case processing of that kind without using computers, and still the work is done largely manually in the Department of Commerce.

We now screen cases by computer. So 56 percent of the cases that we review are returned within 48 hours; that is, a positive decision to go forward and not object within 48 hours, and there is no reason why automated screening cannot greatly improve the quality of the product that we deliver to the business community.

But over the years the business community, instead of asking to have a machine that works, has asked you to neglect that machine, to permit it to rust and atrophy or to dismantle the controls altogether, and the Commerce Department in the past, before this administration, which was never enthusiastic about the administration of these controls, never asked for the necessary resources to do a competent job.

That, in my view, is the way to achieve an appropriate balance between national security on the one hand and our interest in exports on the other, and it goes beyond national security. To the degree to which we spend more on defense, we are spending less on other programs, social programs, the kinds of things that are very much in dispute as we struggle to stay within reasonable budget deficits, and our defense budget is driven upward every time the Soviets make the kinds of breakthroughs that we have to respond to in order to keep technological pace.

Some of the examples are heartbreaking.

Recently, two companies in two different countries, large companies, conspired to deliver to the Soviet Union some highly specialized equipment that they knew would enable the Soviets to fabricate a critical piece of military technology they lacked the capability to fabricate. The end result of that capability now in Soviet hands is that a number of American military systems—I could get into more detail in a closed session—will have to be upgraded at enormous expense, in the hundreds of millions immediately and over the long term in the billions, and the benefit of these two companies in two CoCom countries was a handful of pennies.

This is the sort of situation we face, and I worry about the idea that you can take a meat ax to the system and lop off 40 percent of this and 30 percent of that.

Senator **Sarbanes**. Let's take that example which occurred under the existing system and not under any proposed changes.

First of all, let me specifically ask, did any of the proposed changes the administration has submitted aid and abet that example?

Mr. **Perle**. Let me put it this way. To the degree to which—oh, the administration's proposed changes? No.

Senator **Sarbanes**. What was it in the existing system that allowed that to happen?

Mr. **Perle**. I can't give you the section in the regulations that permitted this sort of thing to happen.

In the case I am talking about the technology possessed by the companies in those two countries were beyond our control, but these are companies and countries with which we have an abundant technology sharing relationship, both governmental and private.

Senator **Sarbanes**. But it wasn't beyond CoCom's control, was it?

Mr. **Perle**. It was not beyond CoCom's control. We presently lack the means, in my view, to bring real leverage to bear in order to support enforcement of the CoCom regulations.

I very much supported Senator Heinz' approach the last time this issue was under discussion, to give the administration authority to take some punitive action against companies that blatantly violate the CoCom controls, and it was watered down. It was watered down in the Congress, and as a result of the way in which it was watered down, I think there is a question as to whether the Heinz amendment can be applied in the current case.

CONTROL TOO EXTENSIVE

Senator **Sarbanes**. It was asserted before us in testimony this morning that the extent, the scope of the matters which we now try to control is so extensive that it impedes the effort to control those items which everyone would say really must be controlled. The net is cast so broadly that in fact it impedes really doing the things that everyone agrees must be done.

What is your reaction to that?

Mr. **Perle**. I understand that argument, and I have great sympathy for it because obviously what we want to do is impede the flow of the technology that makes a difference, and if we spend our time chasing technology that doesn't make a difference or where the effort is futile, we diminish our effectiveness with respect to the technology that matters and we are not doing our job.

So the net should be cast no wider than is necessary to meet critical national security objectives. There are differences of opinion as to what that means, and what I discovered over the years is that the people who make that bland assertion are generally not prepared to follow up by handing us a list of the items that should be removed from the list in order to cast that net more precisely.

I think we should be reviewing the list of embargoed technology constantly with a view to winnowing that list so that we don't cast the net broader than is necessary, and what I wish we had received from the National Academy and from others who have commented on this is a list of items that they think we ought to strike from the list.

We should respond quickly to that, but I find that the issue is not really the length of the list. There is a lot of confusion. The list is long in order to make it precise, so that in different countries, different licensing officers can turn to the reference materials and make a consistent decision. If we had a very short list of broad generic categories, then you would get a capricious decisionmaking, or what would appear to be capricious, in any case inconsistent decisionmaking.

So you need a long list in order to be precise. The question is: Are there items on it that shouldn't be there and to the degree to which they are they ought to be removed?

But legislation that says, a priori, 40 percent of the items on that list shouldn't be there and therefore remove 40 percent, I think is a meat ax approach that would run a very serious risk of jeopardizing our security, and I would not want to vote to reduce the list by 40 percent and then have to explain at some point in the future how it is that the thing that had to fall from the list because of that statute turned out greatly to increase Soviet military capability.

So I hope the Congress will restrict itself to emphasizing, as I know it believes, that the list ought to be as short as is consistent with our security but not give us an arbitrary figure.

Senator **Sarbanes**. Do you think it is possible to take a category of items at the lower end of the technology and eliminate them as a category?

Do you think the list now is so extensive—and I am not simply taking a number. I am trying to use a standard to apply.

Can you take a standard that relates to low level technology and apply that and reduce the risk and if that was a rational way to proceed?

Mr. **Perle**. Senator, I am sure there are items on that list that we could safely remove from the list. How many and which ones they are I can't tell you now.

I think an orderly decision process ought to lead to that conclusion.

But let me say one thing that is often lost in this. You referred to the low end of the list.

Intuitively, if one were to reduce the list, you would start at the low end and not the high end. Low and high in this case are expressions of relative sophistication. At the high end you have state of the art; at the low end presumably you have technologies that are older than that.

That is important for many purposes, but for the purposes of protecting our security what is vital is that we restrain the flow of those things that would have a significant military impact, and they may not be state-of-the-art technologies.

And I can give you one dramatic example.

MILITARY IMPACT

Some years ago, the Government licensed Dresser Industry to supply to the Soviet Union a turnkey plant for the production of rock drill bits for oil exploration. This was the subject of some controversy. Scoop, in those days, chaired the Government Operations Committee, and we held hearings on, and called a lot of witnesses, on how that decision was made. It turned out that off in an Army laboratory somewhere, there was a memorandum, the only fellow in the whole system who thought this, a memorandum expressing the concern that the Soviets might extract from this facility, the highly specialized tungsten carbide fabrication capability and extracting the technology from that and produce more effective armor-piercing shells.

The license was granted, and we now know that the Soviets did precisely that. They began fabricating much superior armor-piercing shells, based on that technology. That was not new technology. In fact, it was quite old technology, but it evolved rather slowly. But the Soviets didn't have that technology until we transferred it to them, not realizing what we were doing at the time. As a result of that, Soviet armor-piercing shells can penetrate tanks in the U.S. inventory. So we have to respond to that by producing better tanks and modifying older tanks, which means an enormous added investment, and the value of that total contract was a few tens of millions of dollars.

So if somebody had said what do you do with rock drill bit technology, how do you handle that on the list, the answer would be that this is the low end of the list. It is the kind of thing that ought to be removed, but in this particular case, it was licensed with catastrophic consequences.

So I don't think there is any substitute for careful and discriminating judgments about what it is safe to remove and what it is in our security interests to retain.

Senator **Sarbanes**. Secretary Derwinski, did you want to comment on any of the items we have been talking about?

Mr. **Derwinski**. Only that very early on, Mr. Perle did agree with you that the principle that a shortened list would be easier to administer. Given that agreement in principle, I see no reason why, with a combination of executive branch cooperation and legislative cooperation, we couldn't hammer it out to everyone's satisfaction.

Senator **Sarbanes**. General Allen was very strong that if these controls are to be effective, they must be multilateral. The point was made that if what we seek from the other countries is so broad that they are unwilling to subscribe to it, they just think we've cast the net too broadly, then it is more difficult to get their cooperation and that a more focused concentrated effort might, in fact, be more successful in achieving our objectives, in terms of restricting important items of technology that we do not want to see transferred.

Can I get your reactions to that observation?

Mr. **Perle**. General Allen's panel made a quick trip to Europe, and they went to the Pacific as well. I have been living and breathing CoCom for the last 6 years and watched it for 10 years before that from here, and a couple of points need to be made.

The first is that our allies subscribe to the same list that we subscribe to. They may disagree with some of the things on the list, but they nevertheless operate according to the same list with very rare exceptions. Occasionally, we would embargo something that is not embargoed by an allied country, because we are in the process of attempting to negotiate the addition of that item to the existing list. And there are foreign policy controls, not national security controls, that we sometimes apply, that our allies not only are not sympathetic to, but vigorously disagree with.

So there was a question about being more persuasive about the size of the list.

Second, there is a certain amount of bargaining that goes on in CoCom, and one of the ways in which we hope to maintain the essential items on the list is by the way in which we negotiate removals from the list. That is a practical reality. In addition to being as persuasive as we are, it helps to have a little leverage in negotiation.

Senator **Sarbanes**. To maintain a protective margin, I take it.

STATEMENT OF THE HONORABLE RICHARD N. PERLE
ASSISTANT SECRETARY OF DEFENSE FOR INTERNATIONAL SECURITY POLICY
BEFORE THE COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS
OF THE U.S. SENATE

MARCH 17, 1987

I AM GLAD TO MEET WITH YOU TODAY TO DISCUSS THE ADMINISTRATION'S POLICY ON EXPORT CONTROLS.

ILLICIT TRADE IN HIGH TECHNOLOGY IS A THREAT TO WESTERN SECURITY. THE U.S. GOVERNMENT'S 1985 REPORT SOVIET ACQUISITION OF MILITARILY SIGNIFICANT WESTERN TECHNOLOGY: AN UPDATE CONFIRMED THAT THERE IS A SYSTEMATIC, WELL-ORGANIZED SOVIET PROGRAM FOR OBTAINING SOPHISTICATED MANUFACTURING, COMPUTER AND OTHER SENSITIVE TECHNOLOGIES. RECENT INTELLIGENCE REPORTS SHOW THAT MORE THAN 5,000 SOVIET MILITARY PROJECTS ARE BENEFITING FROM PURLOINED WESTERN TECHNOLOGY, AND THE NUMBER APPEARS TO BE GROWING. THIS THREAT IS PARTICULARLY WORRISOME BECAUSE A SUBSTANTIAL LEAD IN KEY TECHNOLOGIES IS ESSENTIAL IF THE WEST IS TO OFFSET THE SOVIET QUANTITATIVE MILITARY ADVANTAGE.

WHEN THIS ADMINISTRATION CAME TO OFFICE SIX YEARS AGO, WE WERE FACED WITH A GROWING LOSS OF TECHNOLOGY TO THE SOVIET UNION AT A TIME WHEN WE HAD ONLY BEGUN OUR EFFORT TO REBUILD AMERICA'S MILITARY STRENGTH. WE DETERMINED THAT THIS SITUATION HAD TO CHANGE, AND WE REDOUBLED U.S. EFFORTS TO PREVENT SOVIET THEFT AND PURCHASES OF OUR ADVANCED TECHNOLOGY. OUR EFFORTS HAVE PAID OFF.

WE NOW HAVE IN PLACE AN EXPORT CONTROL PROCESS WHICH RENDERS IT VERY DIFFICULT FOR THE SOVIETS TO BUY OR STEAL OUR TECHNOLOGY.

WE NOW INTEND TO CONSOLIDATE OUR EFFORTS WITH INITIATIVES AT HOME AND ABROAD TO REGULATE STRATEGIC TRADE IN A WAY THAT DEFENDS OUR SECURITY, REDUCES ADMINISTRATIVE BURDENS, PROMOTES REAL COMPETITIVENESS IN FREE WORLD TRADE AND STRENGTHENS ENFORCEMENT OF INTERNATIONAL EXPORT CONTROLS. THE PRESIDENT HAS DIRECTED THE CABINET TO PROVIDE RECOMMENDATIONS, BOTH TO MAINTAIN THE STRENGTH OF AMERICA'S HIGH TECH INDUSTRIES AND TO ENSURE THAT OUR CONTROL SYSTEM ENCOURAGES EXPORTS WITHOUT SACRIFICING NATIONAL SECURITY. THE DEPARTMENT OF DEFENSE FULLY SUPPORTS THIS INITIATIVE.

I WILL REMIND YOU THAT SECRETARY WEINBERGER TOLD THE FULL FOREIGN AFFAIRS COMMITTEE ON FEBRUARY 18 THAT IT WAS "IMPORTANT TO PRESERVE THE TECHNOLOGICAL LEAD THAT WE HAVE AT THE MOMENT BY A SMALL MARGIN--EVEN THOUGH WE PERHAPS DON'T MAKE AS MANY SALES AS WE COULD." WITH REGARD TO LEGISLATIVE OR ADMINISTRATIVE CHANGES, THE SECRETARY STATED THAT "I WOULD WANT TO BE SURE THAT THE CONTROLS AND ANY CHANGES WE RECOMMENDED WERE SUCH THAT THESE CONSIDERATIONS COULD RECEIVE A VERY CAREFUL EXAMINATION, AND THAT IN THE FINAL ANALYSIS IF IT CAME DOWN TO A QUESTION OF WHETHER WE COULD MAKE ANOTHER SALE OR WHETHER WE WERE HURTING THE SECURITY OF THE COUNTRY, THAT THE LATTER VIEW WOULD PREVAIL."

WHEN THIS ADMINISTRATION ASSUMED OFFICE IN 1981 WE INHERITED AN ADMINISTRATION STRUCTURE FOR EXPORT CONTROLS THAT WAS ANTIQUATED AND INEFFECTIVE. DECISIONS ON LICENSES WERE OFTEN SUBJECT TO

DISABLING DELAY; DECISIONS WERE SOMETIMES CAPRICIOUS. WE IN THE DEPARTMENT OF DEFENSE HAVE MOVED TO REMEDY A SITUATION THAT DENIED OUR EXPORTERS THE QUICK AND CERTAIN DECISIONS THAT THEY HAD A RIGHT TO EXPECT FROM THEIR GOVERNMENT. WE HAVE ADDED PERSONNEL, COMPUTERIZED OUR ACTIVITIES AND ASSISTED IN ENCOURAGING FAIR AND CONSISTENT ENFORCEMENT AND ADMINISTRATION OF THE EMBARGO IN WHICH WE AND OUR ALLIES PARTICIPATE. WITH THE COOPERATION OF THE CONGRESS WE CAN GO FURTHER IN EFFECTING A CONTROL REGIME THAT WILL ASSURE THAT AMERICAN EXPORTERS ARE NOT PLACED AT A COMPETITIVE DISADVANTAGE. THIS WILL REQUIRE ADEQUATE ATTENTION, ENERGY AND RESOURCES AND A WILL ON THE PART OF ALL PARTIES, GOVERNMENT AND PRIVATE, TO MEET OUR TWIN OBJECTIVES OF PROTECTING NATIONAL SECURITY WHILE ENCOURAGING EXPORTS THAT ARE NOT INIMICAL TO IT.

MR. CHAIRMAN, I HOPE THAT WE WILL NOT, IN ASSERTING THE NEED TO ENHANCE AMERICAN COMPETITIVENESS, DISMANTLE THE CONTROLS THAT PROTECT OUR NATION. THE COSTS TO THE FREE WORLD OF CARELESSNESS IN ADMINISTERING TRADE CONTROLS, WOULD BE INTOLERABLY HIGH. WHEN THE SOVIETS INCORPORATE WESTERN TECHNOLOGY IN THEIR OWN MILITARY PROGRAMS WE MUST SPEND MORE ON OUR OWN DEFENSE--OFTEN VASTLY MORE--AND FREQUENTLY THE TRADE BENEFITS ARE MINISCULE IN RELATION TO THE INVESTMENT IN DEFENSE THAT THEY FORCE UPON US.

AT THE SAME TIME, THE ADMINISTRATION BILL MEETS THE NEED TO MAKE U.S. EXPORTS MORE COMPETITIVE AND THE EXPORT CONTROL PROCESS LESS RESTRICTIVE WITHOUT COMPROMISING NATIONAL SECURITY. FURTHER CHANGES TO THE EXPORT CONTROL PROCESS WILL BE ANNOUNCED BY THE ADMINISTRATION AT THE CONCLUSION OF THE NSC-CHAIRED INTERAGENCY REVIEW PRESENTLY IN PROGRESS.

THIS CONCLUDES MY FORMAL STATEMENT. I WILL BE HAPPY TO ANSWER QUESTIONS.

Mr. **Perle**. You try to maintain a protective margin. I think if we didn't, we would be less successful in negotiating with our CoCom partners than we are. The real problem between the United States and its CoCom partners lies not in the concept of the embargo or even the list of items embargoed, but in differing degrees of enforcement. Here I think we have made a far more vigorous effort to enforce the regulations than some of our allies have. How do we get them to do better? We always have the alternative of seeking to the lowest common denominator to find some country that does a poor job and argue that competitiveness requires that we not do a better job.

I think that is the wrong to solve the problem. You've got to encourage those countries that are doing a poor job to do a better one, and I think we can do that, and we have tried very hard to do that.

CoCom had its first high level meeting, political level meeting in 25 years in 1982 at the instigation of the Department of Defense. We have been attempting to modernize that antiquated institution, which had virtually no professional staff, a budget of $½ million in 1982.

We've modernized it a little bit now. We've got a mimeograph machine and there is a Xerox machine in place. The Defense Department has contributed a computer to CoCom, and we have embarked on a broad program of trying to educate our allies to the nature of the Soviet requirements and the benefits they've been deriving from Western military technology, and I think we are making progress.

One of the things that troubles me about roller coaster legislation in an area like this, that troubles me particularly about the proposals to cut 40 percent of the items from the list or to make abrupt changes is that you will destroy our credibility within CoCom. We have been saying to our CoCom partners, this is a serious problem. We've got to pull together to solve it, if we now have to report to CoCom that the Congress has told us to cut the list by 40 percent, we will confirm the suspicions of many in Europe that we manipulate the system for our own commercial advantage, which, of course, we don't do.

So I believe that if we are going to accomplish what Lew Allen has in mind, we've got to have both some authority, and ideally, some sanctions if violations take place, and we must not be subjected to abrupt changes in our underlying approach to this problem.

Senator **Sarbanes**. Secretary Derwinski.

Mr. **Derwinski**. Mr. Chairman, if I may return to what I thought was your original question, within the multilateral procedures that we must follow in CoCom, we have nevertheless achieved certain goals because of our special bilateral relations. I think that is quite obvious. In fact, in preparation for the recent meeting held late January, we consulted with six or seven participating CoCom members on a bilateral basis to prepare for what turned out to be a very successful meeting.

It is the combination of bilateral relations within the larger forum which has permitted us to move ahead.

IRAN CONTROVERSY

Senator **Sarbanes**. I want to ask each of you about the story that appeared in the morning press about the computer sale to Iran. What is the nature of that controversy?

Mr. **Derwinski**. The State Department position, as I understand it Mr. Chairman, is that some time ago, last fall, I believe, the State Department did not object to the issuance of these export licenses on the ground that the end use and the end user were not military. It is my understanding that Secretary Shultz laid this out in more detail yesterday before one of the House committees, but I don't have a copy of his testimony.

Mr. **Perle**. As I understand it, Senator Sarbanes, what is entailed here are licenses to supply computers to, among other entities, to the Islamic Republic News Agency, which propagates the view of the United States as the "Great Satan." Maybe we want our computers to assist people in that, but we had better think about it before we make a decision. I don't believe that it is inevitable, because of the law, that any such license must be granted. I gather that some in the Department view that the law requires that a license should be granted, but there are a number of computers involved, not just one or two. I think it is no secret that the Department of Defense has reservations about the wisdom of selling advanced computers to Iran at this time. As far as I know, the administration, as a whole, has not yet reached a conclusion on this.

There is a process by which the administration does reach conclusions when there are differences among agencies. I think those differences are, on the whole healthy, and produce better judgments, better decisions and expose the issues, so they can be considered within the administration, all the way up to the President, if necessary, and I think where we have sometimes gotten in trouble in the past, is where views were not fully expressed in a timely manner and a thoroughly ventilated consideration.

Senator **Sarbanes**. I take it, what occurred here, that the State Department had to make a statement on foreign policy grounds as to whether the computer sale should go forward, and they concluded that it should go forward; is that correct?

Mr. **Derwinski**. That's correct; that's my understanding.

Senator **Sarbanes**. I take it the Secretary of Defense is differing with that foreign policy judgment.

Mr. **Perle**. Yes.

Senator **Sarbanes**. You're not arguing that there is a national security judgment that the Defense Department needs to make?

Mr. **Perle**. There is a question with large numbers of computers, and as I say, we are talking about the impact of these computers on security in the region. There is an active war in that region, and ultimately, even our own security, if there should be a diversion of these computers, but I think the essence of this is a foreign policy judgment, whether it is wise.

Senator **Sarbanes**. If it had involved a national security matter, it would have had to come to you, for your judgment, would it not, in the Department of Defense?

Mr. **Perle**. That's correct.

Senator SARBANES. So it did not.

Mr. PERLE. If it had been one of the 15 countries on a list, the Department of Defense is only permitted to make national security judgments with respect to a specified number of countries.

This was worked out within the administration and is the subject of a directive from the President. It was necessary to develop this directive because the Commerce Department took the view that the Department of Defense had no authority whatever with respect to licenses to other than communist countries—the Soviet Union, the Warsaw Pact, People's Republic of China, and so forth.

There is a considerable difference of interpretation going on back to a statute that reflected a Scoop Jackson memo that it happens that I wrote for the Senator, but they interpreted it in a very restrictive way, and we had a long argument about this, a rather painful one, and ultimately, it was decided that the Defense Department could comment—we don't dispose of these issues—could comment on some specific countries where there were problems of various kinds. And I know there will be a move in the House to, by statute, prevent the Defense Department from giving a commentary on those cases. I think that would be a great mistake. You don't make policy by silencing opinions. You don't make successful policy that.

We have managed very successfully to discharge our responsibilities with respect to that list of countries without any delay in the process whatsoever. We make our judgments, invariably, before the Commerce Department makes its.

And I hope, if I can take this opportunity, that the Senate will not support legislation that tries to write the Defense Department out of the system. I think the perspective of the Defense Department and the advice of the Defense Department, its lessened susceptibility to the two other influences that are important to this process, foreign countries and our industry, gives it the kind of independence that one would want in the decision process.

I think that is precisely why they are trying to cut us out.

PROMPT DECISIONMAKING

Senator SARBANES. I take it from your earlier comments that you have no objection and, in fact, actually support a very tight time constraint on making decisions; is that correct?

Mr. PERLE. I think we owe it to our exporters to move expeditiously, and we have invested the manpower and equipment to enable us to do so. I am against, in principle, mandated legal statutory deadlines, unless at the same time, the institutions responsible are giving the resources to meet them. Nothing is worse than saying you've got to answer all letters within 24 hours, but we can't provide you with another typist. Nobody can meet the workload of greatly compressed processing time without additional resources. So I have no problem, so long as there is sufficient time to make the judgments in an orderly way on the basis of the information necessary to make them.

But as the time increases, you need additional resources, and the way the Defense Department has managed to shorten the job is by going from 5 people to 150. We now have a Defense Technology Security Administration, a separate entity. It is actually outside the Pentagon, which I think is a first-class operation, and it is giving the business community what it deserves. Our role in this process is being handled carefully and expeditiously, and we are beginning to hear that back from the business community. We have an electronic bulletin board. Any company with a computer and a modem can interrogate the Defense Department computer and learn the status of any license request which is pending, which we might be commenting on.

The Commerce Department ought to do the same thing.

There is a great deal that can be done to fix the machinery without dispensing with it.

Senator **Sarbanes**. Over what time period did you go from this five-person operation to this 1450?

Mr. **Perle**. Over the last 6 years. It represented trade-offs, because we had manpower ceilings at various points along the way. So we had to sacrifice personnel in other areas, in order to build up this area of activity.

Those were constant deliberate choices. Other departments have to make similar choices between trade promotion and trade control. They may make them differently, although I believe the Department of Commerce has expanded its effort as well. I think they should be congratulated for that and encouraged to go further.

Senator **Sarbanes**. Did you want to say anything about that?

Mr. **Derwinski**. We have been moving quietly, but we think effectively, Mr. Chairman. Last fall, the President created a new position of Senior Representative for Strategic Technology Policy. It is in the Office of the Under Secretary and was filled by Mr. Robert Dean, who has subsequently moved to a position in the NSC. That office is being given new professional positions, equipment and all the necessary logistical support. We think we are prepared to play a role, depending on the expanded nature of legislation, as well as administrative decisions. So we are quite comfortable in our ability to met our responsibilities.

Senator **Sarbanes**. Gentlemen, thank you very much.

The committee stands adjourned.

[Whereupon, at 1:00 p.m., the hearing was adjourned.]

EXPORT CONTROLS

TUESDAY, MARCH 17, 1987

U.S. SENATE, COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS, SUBCOMMITTEE ON INTERNATIONAL FINANCE AND MONETARY POLICY,

Washington, DC.

The subcommittee met at 9:35 a.m., in room SD-538 of the Senate Dirksen Office Building, Senator Paul Sarbanes (chairman of the subcommittee) presiding.

Present: Senators Sarbanes, Proxmire, Cranston, Dixon, Heinz, and Graham.

OPENING STATEMENT OF SENATOR SARBANES

Senator **SARBANES**. If the panel will come forward, Mr. Hough, Mr. Cohen, and Mr. Pomeroy, and take your places at the table.

This is a second in a series of 6 hearings which the Subcommittee on International Finance and Monetary Policy of the Banking, Housing, and Urban Affairs Committee will be holding in preparation for considering the subject matters under the jurisdiction of this committee which relate to the trade bill.

The majority leader has indicated that he wants all relevant committees to try to deal with this matter with a May 1 deadline in mind.

We held a hearing last Thursday. Today's hearing will also focus on the issue of export controls and U.S. high technology goods and the balance between U.S. national security and international competitiveness in trade.

Next Wednesday, the subcommittee will review the new policy proposals of the Export-Import Bank and the Export Promotion Program of the Commerce Department.

The following day, we will hold oversight hearings on U.S. exchange rate policy.

And the following week, the subcommittee will hold its final two hearings on issues of Third World debt.

I am pleased to welcome this morning for our opening panel representatives of 3 leading industry associations which represent companies which must deal regularly with U.S. national security export controls in the course of conducting business.

Subsequent to this panel, we will hear from another panel, which consists of the Senior Associate Director of the GAO, which has conducted several studies of our national security export control system, and the distinguished former Assistant Secretary of Commerce for Export Administration, who will share with us his perspective on U.S. national security export controls.

Senator Proxmire and Senator Cranston are with us.

Senator Proxmire?

Senator **Proxmire**. Thank you very much, Mr. Chairman.

Mr. Chairman, I ask unanimous consent that my full statement be printed in the record.

Senator **Sarbanes**. Without objection, so ordered.

OPENING REMARKS OF SENATOR PROXMIRE

Senator **Proxmire**. Mr. Chairman, there has been general agreement among all of our witnesses that the Soviet Union does make concerted efforts to acquire our militarily critical dual use technologies and that such efforts have enabled the Soviets to close the gap between their weapons systems and ours.

This requires us to spend increased amounts on our own military to safeguard our security as America and its allies rely on the technological superiority of our weapons to preserve a credible counterforce to the quantitative superiority of the Warsaw Pact. Such increased military spending contributes to our already spiraling budget deficits which impact exchange rates and hurt our trade competitiveness.

So our export control system, if properly operated, can actually benefit America's trade position by helping keep military spending under control.

Now, if that is true, why are there so many complaints about our export control system? Is existing law critically flawed?

General Allen, the Chairman of the NAS Panel, told us last week, and I quote, "that the Export Administration Act as amended recognizes the need for balancing national interests and provides adequate authority to achieve the objectives outlined by our panel."

Mr. Pomeroy, on behalf of the American Electronics Association, will testify later this morning that, and I quote, "that Congress wrote a good law when it acted in 1985 to amend the Export Administration Act. Ample authority was provided for the executive branch to make changes in the export control process for the benefit of national security as well as exporters."

So if the law is not seriously flawed, what is the problem?

General Allen told us that the executive branch policy process, and I quote, "is in disarray" with the Commerce, Defense, and State Departments unable to settle their differences. He further said that mechanisms, such as the National Security Council, which are supposed to resolve interagency conflicts, "have not exercised leadership."

Mr. Chairman, I ask unanimous consent that the rest of my statement be printed in the record.

Senator **Sarbanes**. Without objection.

PREPARED STATEMENT OF SENATOR WILLIAM PROXMIRE

Mr. Chairman. This is the second of two hearings which you have held in your Subcommittee to review the operation of our Nation's export control system. That system, which was first established during World War II, helps to ensure our country's national security by preventing the export to our adversaries of certain militarily critical technologies. Last week we heard from senior officials of the Commerce, Defense and State Departments along with the Chairman and other members of the much-acclaimed National Academy of Sciences Panel on the Impact of

National Security Controls on Technology Transfer. My review of the testimony given at that hearing and of the prepared testimony of today's witnesses convinces me that we do not have to make major changes in the Export Administration Act which Congress last amended in 1985. Most problems with the operation of our control system stem not from that law, but rather from the way it is being implemented by this Administration. Let me explain.

There has been general agreement among all of our witnesses that the Soviet Union does make concerted efforts to acquire our militarily critical dual use technologies, and that such efforts have enabled the Soviets to close the gap between their weapons systems and our own. This requires us to spend increased amounts on our own military to safeguard our security as America and its allies rely on the technological superiority of our weapons to preserve a credible counterforce to the quantitative superiority of the Warsaw Pact. Such increased military spending contributes to our already spiralling budget deficits which impact exchange rates and hurt our trade competitiveness. So our export control system, if properly operated, can actually benefit America's trade position by helping keep military spending under control.

If this is true, why are there so many complaints about our export control system? Is existing law critically flawed? General Allen, the chairman of the NAS Panel, told us last week "that the Export Administration Act as amended recognizes the need for balancing national interests and provides adequate authority to achieve the objectives outlined by our panel." Mr. Pomeroy, on behalf of the American Electronics Association, will testify later this morning that "Congress wrote a good law when it acted in 1985 to amend the Export Adminstration Act. Ample authority was provided for the executive branch to make changes in the export control process for the benefit of national security as well as exporters."

If the law is not seriously flawed, what is the problem? General Allen of the NAS Panel told us that the executive branch policy process "is in disarray" with the Commerce, Defense and State Departments unable to settle their differences. He further stated that mechanisms, such as the National Security Council, which are supposed to resolve interagency conflicts, "have not exercised leadership." As a result, he said "the U.S. policy process for national security export controls continues to lack proper direction and affirmative leadership at the highest level to balance both military security and economic vitality." "Most changes," he said that the NAS Panel recommends "could be accomplished by administrative action." Administration witnesses did not quarrel with that analysis, but lacking Presidential leadership, they have come to Congress asking us to settle interagency disputes. I for one do not believe Congress should remove the Defense Department from reviewing export licenses because the administration can not decide whether to issue licenses when DoD objects. Nor do I believe that Congress can decide which items really need to be controlled and which do not. An improved export control system must come from Executive Branch competence, not from Congressional micro-management of the control process.

I hope each of our witnesses today will focus on telling us which of their various recommendations for improving our present system really need new legislation, and which require only competence in the Executive Branch.

Thank you.

Senator Cranston?

OPENING STATEMENT OF SENATOR CRANSTON

Senator Cranston. Thank you very much, Mr. Chairman. I do have a brief statement I would like to make, and I appreciate the opportunity to discuss with you our export control system.

Thank you for calling these hearings on a matter of vital interest to our U.S. trade policy.

Fresh oversight of our export control system is very badly needed. As we debate trade policy, I believe it is imperative that revision of our export control system be a part of any effort to enhance the overall competitiveness of U.S. industries.

Several proposals to reform our export control system have been put forward, including one by two distinguished members of this subcommittee.

As you know, I recently introduced, with Senators Evans, Adams, and Kerry, another proposal to revise the Export Administration Act.

While these proposals differ in some significant respects, I believe we are all after the same goal—reduce the red tape that is strangling U.S. exports and give business a system where licenses are acted upon promptly using a rational and consistent set of principles.

California is the Nation's leading export State and, as such, has a special stake in the export control process. I have heard countless anecdotes throughout the State that tell one story: a story of lost sales, withdrawn licenses, and an absence of confidence in our present system of controls. The frustration is deep and pervasive.

No one disputes the need for national security export controls. However, we must realize our economic security and our national security are interdependent. United States economic security is based on a creative and vibrant commercial sector which is ahead of the technological curve. We must reform our export control system to retain the vitality of our high technology industries.

The emphasis of my bill is twofold—decontrol and delicense items when such actions will not endanger our national security, and eliminate the Department of Defense's de facto veto authority over the export control system and licensing review process.

Mr. Chairman, in particular, I urge you to review and clarify the role of the Defense Department in the export licensing process. Too often the reality is that the Defense Department exercises a de facto veto power over the licensing process.

The Export Administration Act clearly recognizes the Department of Commerce as the lead agency in carrying out this act. Ultimately, clarification of this fact and the Defense Department's role in the licensing process would be the most useful reform that we could make.

I feel it is essential to put some teeth in the timeframe in which DOD reviews a license, and it is essential to eliminate the requirement that the President must notify the Congress when he disagrees with the Secretary of Defense on whether a certain item should be added to or deleted from the control list.

I find it astonishing that the Commander in Chief of the Armed Forces is required to notify the Congress when he disagrees with his Defense Secretary on a matter like this. It seems that this requirement has been used more as a tool of intimidation than having any real value in the process.

In addition, I believe that we could, with certain exceptions, eliminate licenses and reexport licenses to CoCom countries for those products subject to multilateral controls within CoCom. In fiscal 1985, for example, Congress approved over 99.8 percent of licenses to CoCom. Clearly, we are licensing too many items.

Mr. Chairman, I think it is important to start requiring the Secretary of Commerce to publish a list of those unilateral controls the United States maintains together with a specific justification for each control.

While my proposal makes a number of other changes, I just wanted to highlight some of those areas where I differ with some of my colleagues on the subcommittee. I urge you to weigh and consider these suggestions as you review the export control system.

I firmly believe that the United States will succeed in limiting technology transfers to the East only to the degree that we coordinate efforts and cooperate with our CoCom allies to enact effective multilateral controls.

Given the globalization of the high technology industry, unilateral controls will not be effective and in the end will undermine the competitiveness of U.S. industry.

Mr. Chairman, I appreciate the chance to be here today to express my views on this very important matter. I look forward to working with you and other members of the committee to see that we achieve the much needed reforms to the Export Administration Act.

Thank you very much.

Senator SARBANES. Thank you very much, Senator Cranston.

Senator Heinz?

OPENING STATEMENT OF SENATOR HEINZ

Senator HEINZ. Mr. Chairman, thank you. I will be brief.

As our witnesses and others may know, we did have our first round of hearings last week, featuring the administration and NAS. I thought they made a most compelling case that our present system of export controls is severely strained, most imperfect, and that most importantly of all we can substantially improve our export performance without sacrificing our national security.

I might add that our witnesses did disagree to some extent on how far we might go, but there was nonetheless unanimity, consensus on the fact that change is appropriate, and it is desirable to do a very good deal of it in legislation in order to give stability to what we agree upon.

I hope that those of you who are testifying today will pick up where the last set of witnesses left off, that is, by discussing in some detail what problems the business community has encountered in dealing with our export control system and of course how, therefore, it needs to be improved. I hope you will comment with some specificity on pending bills.

Senator Cranston has a bill. I have a bill. There is an administration bill that is before us.

Let me also invite you to make comments on foreign policy controls and the administration's use or potential overuse of the International Emergency Economic Powers Act, [IEEPA].

We didn't focus on that last week, although it has been a serious problem.

Finally, let me indicate with a bit of regret that I have two other hearings this morning, one in Finance on section 301, which is not unrelated to the problems of exporters, and I will have to, at least between Finance and this committee, divide my time to the best of my ability.

Thank you, Mr. Chairman.

Senator SARBANES. Thank you, Senator Heinz.

Senator Dixon?

OPENING STATEMENT OF SENATOR DIXON

Senator **Dixon**. Thank you very much, Mr. Chairman. I am pleased to be here this morning as the International Finance Subcommittee continues its hearings on Export Administration Act issues, including the National Academy of Science's study and the legislation cosponsored by my friend from Pennsylvania, Senator Heinz, and myself.

At the outset, I would like to express my regret that I am unable to stay for the entire hearing. I am chairing a hearing this morning on my Readiness, Sustainability and Support Armed Services Subcommittee, and that hearing is now underway. I am therefore unable to spend as much time here as I would prefer.

I want to make it clear, however, that my schedule conflict is in no way a reflection of my estimate of the importance of the issues that will be discussed by the witnesses today.

I am committed to reforming our export control laws to improve our international competitiveness. While I am a member of the Armed Services Committee and yield to no one in my desire to ensure that the Soviets do not get access to technology that will enhance their military capabilities at our expense, I agree with the conclusions of the National Academy of Science's report.

I believe that our export control system has gotten out of balance and that it needs correction to ensure that American companies have the opportunities they need to compete effectively in a rapidly changing international marketplace.

I hope all the witnesses will take a good look at the legislation Senator Heinz and I have introduced. S. 547 does not pretend to be a complete answer for all Export Administration Act problems. I believe it does represent a real step forward.

This committee will soon be marking up its contribution to the overall trade package that will be going to the Senate floor later this spring. I think it is important that it includes strong export control reform provisions. I look forward to working with all of my colleagues on the committee, with those testifying here this morning, and with all interested parties toward that goal, and I thank you very much, Mr. Chairman.

Senator **Sarbanes**. Thank you, Senator Dixon.

Mr. Pomeroy, we are prepared to hear from you and the other members of the panel.

STATEMENT OF JOHN E. POMEROY, AMERICAN ELECTRONICS ASSOCIATION, PRESIDENT, UNIVERSAL INSTRUMENTS CORP., BINGHAMTON, NY

Mr. **Pomeroy**. My name is John Pomeroy. I am president of Universal Instruments Corp. We employ about 1,600 people. We manufacture production equipment for the electronics industry.

Literally, all of our products are manufactured in the United States. Last year we exported 56 percent of our output.

I am here representing the American Electronics Association. The association has more than 3,200 members. The companies are located all over the United States. Two-thirds of those member companies have less than 200 employees.

I am a member of the Export Control Task Force of the AEA. Last week, the Export Control Task Force released a report of specific problems that member companies have had with export controls recently.

I can answer your question, Senator Heinz. Many of the examples are in this report that was given to your staff this morning. I will give you specific examples of things that have happened.

They document delays, complex and inconsistent regulations, examples of unilateral and extraterritorial controls which can cause many of our member companies to lose some of their competitiveness in the world market.

I hope you will include this in AEA's testimony.

Before I address the issues, let me say that we in the electronics industry are very grateful to your subcommittee spending the time on what we consider to be a very important issue when there are many other important national priorities.

Mr. Chairman, in the early part of the 1970's, I was personally involved in the machine tool industry. At that time that industry was clearly the leader in the world in that segment of the industry.

Today, due to a competitive decline, the U.S. machine tool industry is a distant fourth in the world, behind Japan, West Germany, and even the Soviet Union.

The past few years I have seen many similar things happening in parts of the electronics industry. Export controls are not the only competitiveness issue, but it is one that can be corrected quickly.

We are not here asking for subsidies or assistance, but an improved regulatory environment which promotes exports as well as improving national security.

The recently published study of the NAS, on which you heard testimony, points out many of these problems and situations. As we read the study, we draw two conclusions.

One is that today's KGB shopping list is significantly shorter than our export control list.

And, two, by placing higher fences around fewer items, we can eliminate trade impediments and better protect our national security.

We believe, of course, that promoting security and facilitating exports are not inconsistent. By focusing our resources on the truly critical items, we can provide more protection against diversion and eliminate hurdles for low technology items, and we can speed up the processing of licensing for those items that are on the list.

We would urge the committee to merge the three bills that they are now considering into one bill. Many of the items that are in those bills now are things that the Export Control Task Force of the American Electronics Association has recommended. We also believe that there are few things that have not been addressed yet in those bills.

One is to achieve a license free zone in CoCom by 1990; that is, to have the 16-member countries of CoCom form a license free zone, where you only have to have a license if you went outside the boundaries of that zone.

Two, is to provide a greater role for the technical advisory committees. Those committees are already constituted. They include

RESPONSE TO WRITTEN QUESTIONS OF SENATOR PROXMIRE FROM
EDWARD DERWINSKI

Q: You are relatively new to the technology transfer issue, but have had substantial experience with the international diplomatic process in your time at the State Department. How would you rate the chances of achieving the type of comprehensive and effective multilateral control agreement necessary before substantial dismantling of independent U.S. controls could be contemplated?

A: While the current U.S. system of controls on the transfer of technology was developed largely in concert with our allies, each country operates its own national export control system. What we share is the belief that our adversaries should not be allowed to improve their military capabilities through unrestricted access to advanced Western technology. For decades, we have maintained a dialogue with our allies, primarily through the Coordinating Committee (COCOM) which meets in Paris, to ensure that our controls systems take into account the rapid pace of technological development and the changing world political situation. From my discussions with these allies, I am convinced that they share the U.S. commitment to improving our export control systems. I expect, therefore, that within a reasonably short time we can agree unilaterally to modernize our controls, concentrating on those goods and technologies which truly should be safeguarded, while improving effectiveness in their application.

Q: Would it be the view of the State Department that such dismantling of controls should precede the successful outcome of negotiations?

A: A number of changes can, and in some cases have, already be made. For example, the Department of Commerce has added simplified licenses for the export of certain commodities or for specific destinations. The U.S. also has a number of foreign policy and other controls which are unilateral and in some cases unique to our export control system. Changes in our unilateral trade controls do not require consultation or agreement with our allies. However, it would be undesirable to take preemptive steps with regard to the range of strategic controls which have been developed multilaterally and to which we are committed along with our allies.

members of industry and members of government. We should give more teeth to the recommendations of those committees.

Last, is to provide, some mechanism to resolve disputes between agencies in the Government. Delayed licenses mean lost sales. Sometimes they mean lost customers, and that is even worse.

How can we provide that mechanism? We see two possible ways to do it. One is to try to write a private right of action provision to bring the courts into play. The other is to set time limits. I think these things need to be looked at very carefully to find a good way to try to resolve these disputes.

In summary, Mr. Chairman, as I said in my prepared statement, and Senator Proxmire indicated, we believe the Congress did write a good law when it amended the Export Administration Act in 1985. Regrettably, however, Senator Proxmire did not say this authority has been seriously underutilized. Although recent announcements by the Commerce Department are encouraging, the provisions in the Act related to maintaining a focused control list are virtually inoperable today. It is AEA's belief that by the adoption by Congress of additional adjustments to the EAA described here, it will help cause the law to be implemented as Congress intended.

Mr. Chairman, on behalf of the American Electronics Association, thank you for the opportunity to be here today. I will be glad to answer any questions that you have.

[The complete prepared statement of John E. Pomeroy follows:]

Testimony of
John E. Pomeroy
President
Universal Instruments Corporation
Binghamton, New York
on behalf of the
American Electronics Association
before the
Subcommittee on International Finance and Monetary Policy
U.S. Senate
Washington, D.C.
March 17, 1987

SUMMARY

1. AEA endorses the recommendations of the NAS panel on export controls.
    - Today's KGB "shopping list" is much shorter than the U.S. control list;
    - We need to place "higher fences" around fewer items.
2. Promoting both security and exports are NOT inconsistent. By focusing controls the U.S. can:
    - Provide more protection against diversions;
    - Eliminate licensing hurdles for exports of low-tech items;
    - Speed up the processing times of the remaining applications.
3. AEA urges the adoption of a nine-point plan aimed at promoting security and exports.
    - Most provisions are included in S. 652 and S. 547. .
    - Additional provisions should be added establishing policy goals and providing for greater industry input in the export control process.
4. A mechanism is needed to resolve interagency disputes.
    - Disputes cause the list review process to fail;
    - Disputes are a leading cause of long licensing delays;
    - Provisions in S. 652 can help correct these problems.

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Mr. Chairman, Members of the Subcommittee, my name is John E. Pomeroy and I am President of Universal Instruments Corporation. Our company employs over 1,600 people who are primarily engaged in the manufacture of various types of automation equipment used for electronics manufacturing.

I spent the early part of my business career in the machine tool industry, which in the early 1970s was the world's leader. As a result of a competitive decline, that industry is now a distant fourth in the world behind Japan, West Germany and the Soviet Union. In the past 10 years, I have seen similar trends happening in parts of the electronics industry. These competitive problems occur for a wide variety of reasons of which export controls is only one. My testimony will focus on how export control problems can be corrected legislatively in a way which puts U.S. exporters on a level footing with COCOM countries. Our industry is not asking for subsidies or assistance, but an improved regulatory environment that promotes exports as well as national security.

Today, I come before the Subcommittee representing the American Electronics Association (AEA) which consists of 3,250 high technology companies across America. AEA is the largest trade association representing the U.S. electronics industry, and includes all segments of the industry, such as computers, telecommunications, instruments, semiconductors, and software. Two-thirds of our member companies employ less than 200 people. Within AEA, I am a member of the Task Force on Export Controls which released last week a report of specific recent examples of problems AEA companies have encountered with the export control system. A copy has been given to each member of the Subcommittee, and I hope you will include this study in the record as part of AEA's testimony.

Mr. Chairman, before I address specific issues relating to legislation aimed at improving the U.S. export control system, let me say that we in the electronics industry are grateful for the time you, the members of this Subcommittee, and your staffs have devoted to the export control issue today. We realize that many other pressing issues of national importance face this Subcommittee, and we are thankful that the Subcommittee is visiting the export control issue in 1987.

Congress wrote a good law when it acted in 1985 to amend the Export Administration Act (EAA). Ample authority was provided for the Executive Branch to make changes in the export control process for the benefit of national security as well as exporters. Regrettably, this authority has been under utilized, although recent announcements by the Commerce Department are encouraging. In particular, the provisions in the Act relating to maintaining a focused control list are virtually inoperable today. It is AEA's belief that the adoption by Congress of the additional adjustments to the EAA described here will help cause the law to be implemented as Congress intends.

AEA ENDORSES THE RECOMMENDATIONS OF THE NAS PANEL

Mr. Chairman, I wish to begin my discussion of export control issues by stating first of all that AEA endorses all of the recommendations of the NAS panel recently published in *Balancing the National Interest: U.S. national Security Export Controls and Global Economic Competition*. I am sure that the Committee is aware that the panel consisted of an impressive list of experts, including former Air Force Chief of Staff General Lew Allen, former National Secuirty Agency Director Bobby Inman, and former Defense Secretary Melvin Laird. In addition to the recommendations, the study provides an excellent analysis, including statistical data, of the current strengths and weaknesses of the U.S. export control system. Much of the data presented in the report had not been compiled previously for Congress or the public.

To help the Subcommittee gain a better understanding of how the export control system is presently working, I would like to present just a few of the key points mentioned in the NAS report:

- The Soviet Union continues an aggressive effort to acquire dual use technology;
- 99 percent in value of all items exported under an individual validated license (IVL) are exported to *non*-Soviet Bloc countries;
- 98-99 percent of all IVL applications sent to Washington are approved. This includes applications for exports to the Bloc;
- 54 percent in value of all IVL exports controlled for national security reasons consist of goods which have a level of performance characteristics below the "national discretion" or "AEN" level. This means the U.S. permits COCOM countries to export these items to the Soviet Bloc without U.S. approval;
- 72 percent in value of all IVL exports controlled for national security reasons consist of goods which have a level of performance characteristics below the "PRC Green Line". This means the U.S. permits COCOM countries to export these items to the People's Republic of China without U.S. approval;

- 4 percent of all West-West IVL exports take longer than 30 days "in the system" to process. This does not include the additional time necessary -- often two weeks -- for applications and approved licenses to be sent to and received from the Department of Commerce;

- 52 percent of high technology companies surveyed by the NAS panel reported lost sales primarily as a consequence of export controls;

- 38 percent had existing customers express a preference for shifting to non-U.S. sources of supply to avoid entanglement in U.S. controls;

- applications for exports to COCOM countries take an average of 14 calendar days -- within the 15 working day requirement specified in the EAA;

- applications from smaller firms take 14 percent longer to process than applications from larger firms;

- all national security export controls cost U.S. exporters $9.3 billion in exports per year and about 188,000 jobs. These figures do not include subsequent losses due to lost market share.

Given these facts and other evidence received from AEA companies and the NAS report, two key conclusions can be drawn about the export control system:

1. Today's KGB "shopping list" is much shorter than the U.S. control list;

2. By placing "higher fences" around fewer items, the U.S. can better protect our security while eliminating impediments to trade of those items already available to the East.

PROMOTING BOTH U.S. SECURITY AND EXPORTS ARE NOT INCONSISTENT

The statistics presented in the NAS report point to the fact that the U.S. export control system is fundamentally a paperwork exercise. Today, most controlled exports to the West consist of "low-tech" items available in the Bloc. Security-minded Members of Congress should ask: "How many diversions of leading-edge technology have been overlooked because the Departments of Commerce and Defense devote resources to processing applications of 'low-tech' items already available in the East?"

By focusing its limited control resources on the truly critical items, the U.S. can:

1. provide more protection against diversions;

2. eliminate licensing hurdles for exports of low-tech items; and

3. speed up the processing times of the remaining applications.

AEA URGES THE ADOPTION OF A NINE-POINT LEGISLATIVE AGENDA TO PROMOTE SECURITY AND EXPORTS

Mr. Chairman, in order to meet these objectives and implement the recommendations of the NAS report, AEA urges the Subcommittee and full Banking Committee to include as its contribution to the omnibus trade legislation our nine-point proposal of amendments to the Export Administration Act. Our specific proposals and suggested language are attached as an appendix to this testimony.

In crafting these proposals, we have sought to propose changes to make the Act work as Congress intended. We have tried to avoid recommending provisions which might constitute statutory micromanaging of the export control system. Instead, AEA has submitted to several agencies involved in the export control process a separate plan of management-oriented solutions to several export control problems.

Mr. Chairman, there are several similarities between the AEA proposals and the provisions of S. 539 (the Administration's trade proposal), and especially S. 547 and S. 652. Each of these bills includes amendments to the EAA. S. 547 and S. 652 are outstanding bills, and AEA wishes to thank Senators Heinz, Dixon, Cranston, and Evans for their work on these bills and early leadership on export control issues in the 100th Congress. It is AEA's hope that the Subcommittee will merge the export control provisions of these three bills into one, include some additional provisions, and act to include the resulting legislation in the Senate's omnibus trade bill.

I would like to indicate at this time which provisions in these bills are similar to AEA's recommendations and should be passed by the Committee. The bills provide for:

- the elimination of controls on exports of low-level technology to free-world countries (Section 3(b) of S. 547 and Section 6 of S. 652);
- the elimination of ineffective reexport controls (Section 5 of S. 652, and Section 3(a) of S. 547);
- making determinations of foreign availability based upon the availability of items in Western countries (Section 4(b) of S. 547, and Section 10(a) of S. 652);
- the publishing of foreign availability allegations and requiring action on such allegations within a specific time period (Sections 3(d) and 3(e) of S. 547 and Section 10(b) of S. 652);

- removing ineffective unilateral controls (Section 8 of S. 652);
- clarifying and broadening provisions in Section 5(m) of the Act in relation to embedded microprocessors (Section 3(h) of S. 547 and Section 11 of S. 652);
- a distribution-type license for certain exports to the People's Republic of China (Section 4603 of S. 539, Section 2(a) of S. 547, and Section 2 of S. 652).

In addition to these provisions, AEA believes that three other provisions not included in these bills are essential to a complete export control bill. These provisions should:

- state that a primary export control policy objective of the U.S. is the achievement of a license-free zone among COCOM countries by 1990. This will require some COCOM countries to improve their export control standards;
- provide a greater substantive role for technical advisory committees (TACs). TAC recommendations are often ignored by policy makers thus discouraging industry from actively participating in the export control process;
- require U.S. industry representatives to accompany the U.S. delegation to COCOM for the purpose of providing technical advice. Many other COCOM countries already do this.

A MECHANISM NEEDS TO BE ADOPTED TO RESOLVE INTERAGENCY DISPUTES

Mr. Chairman, in addition to these items, two other provisions in S. 652, while not proposed by AEA, have merit and deserve the Subcommittee's close consideration.

A critical problem that exists today in the export control system is the inability of officials to resolve disputes between agencies in a timely manner. While 46 percent of West-West exports are licensed in less than 30 days -- poor by today's competitive standards -- 5 percent of all licenses take more than 100 days to process. There is probably no greater way that our government can damage the competitiveness of a U.S. firm than by performing lengthy license application reviews. According to the President's Commission on Industrial Competitiveness, firms in most COCOM nations gain license approval at least four times faster than U.S. firms. AEA members report that foreign manufacturers can obtain export permission from their respective governments in just a matter of hours or days. Delays give U.S firms the reputation of being unreliable suppliers and give foreign customers no choice but to take their business to foreign manufacturers.

The 1985 Act tried to solve this problem. While Commerce Department statistics show that application [illegible] times are gradually becoming shorter, much more work re[illegible] done to eliminate the competitiveness problems caused by licensing delays. The adoption of the measures described earlier in this testimony will help by limiting the number of IVL requests sent to Washington.

In addition to attempting to shorten license processing times, several provisions in current law are intended to focus the control list so that it controls only those items that are not now available to the Soviet Bloc. These provisions have been inoperable despite a consensus in Congress, the Administration, and the private sector that the control list is far too long. In AEA's view, disputes between Commerce and Defense are a leading cause of the failure of the system to work properly.

The Subcommittee should note that S. 652 includes two provisions that address list review and license processing problems.

S. 652 amends section 5(c) of the Act by placing an element of automaticity in the list review process. Whenever the Department of Defense or the President do not act on issues relating to the inclusion of items on the control list, it is presumed that Defense or the President concur with the view of the Commerce Department.

Similarly, S. 652 amends Section 10(g) by streamlining procedures in cases when Commerce and Defense disagree. Inaction on the part of Defense or the President regarding approval or denial of a license is presumed to mean concurrence with the Commerce Department position.

Mr. Chairman, AEA believes these provisions would significantly help to limit the lengthy licensing delays that adversely impact the ability of U.S. exporters to compete in foreign markets.

Another way to limit interagency disputes is to provide fewer opportunities for Defense to disagree. Members of the House are considering efforts to limit the role of Defense specified in Section 10(g) of the Act. AEA companies report that objections raised by Defense in the licensing process are a leading cause of licensing delays. In considering this issue, a key question is: "How often is Defense able to provide information that leads to a denial of a license that otherwise would have been approved by Commerce?" AEA is not privy to such information, but we urge the Subcommittee to inquire with the Departments of Commerce and Defense to obtain such information and use it to help determine if the national security benefits of the Defense role outweigh costs to exporters. Section 10(g) should be amended accordingly.

SUMMARY

In summary, Mr. Chairman, Congress wrote a good law when it amended the EAA in 1985. Unfortunately, some provisions have not been implemented as Congress intended. In particular, provisions intended to help maintain a focused U.S. control list have been under utilized. AEA urges the adoption of its nine-point plan much of which is already contained in S. 547 and S. 652. In addition, we would support efforts by the Subcommittee to include language intended to help resolve and limit disputes between agencies as they arise in the context of control list review as well as decisions made on individual license applications.

Mr. Chairman, on behalf of AEA, thank you for the opportunity to testify today.

Senator Sarbanes Thank you, Mr. Pomeroy.

I think we will hear from the other two members of the panel before we go to questions.

Mr. Cohen.

STATEMENT OF CALMAN J. COHEN, VICE PRESIDENT, EMERGENCY COMMITTEE FOR AMERICAN TRADE

Mr. Cohen. Thank you, Mr. Chairman. I am Calman Cohen, vice president of the Emergency Committee for American Trade, [ECAT].

I am pleased to be with you today to present the views of the group. ECAT is an organization of the chief executive officers of some 60 American firms, which are among the principal exporters of the United States with over $700 billion in worldwide sales and nearly 5 million employees. ECAT firms have a vital interest in the design and operation of the U.S. export control system. ECAT companies take no issue with the imposition of export controls for reasons of the national interest, whether they are for reasons of national security, foreign policy or short supply. They recognize that while such controls may adversely impact their ability and that of other U.S. companies to conduct international business, the overriding national security and foreign policy interests of the Nation may, in certain situations, require the U.S. Government to impose export controls.

The companies are of the view, however, that the system of national security and foreign policy export controls suffers from serious shortcomings. These shortcomings undermine the very effectiveness of the control system itself and unnecessarily harm, not only the ability of companies to do business in the West, but their very competitiveness, as well.

With this problem in mind, an ECAT task force was established to develop a set of recommendations concerning controls on items traded among three world nations. The full set of its recommendations, which I will summarize, appears at the conclusion of this statement. Many of them could be implemented through actions taken by the Administration. Some would require legislative action, such as that contemplated in S. 547. The recommendations developed by the task force are designed to further, as I say, the international competitiveness of U.S. industry in Western markets, through encouraging foreign purchases of U.S. products.

The ECAT members focus on Western markets, because it is in them that we see the greatest potential for increased sales and the enhancement of our competitiveness. The changes proposed should not undermine, I might emphasize, our nation's security, but should strengthen the industrial competitiveness from which it arises.

ECAT RECOMMENDATIONS

The recommendations take the view that firms have been doing their part to prevent controlled goods from reaching proscribed destinations. Now their efforts must be reinforced by Government-sponsored changes in the system which place increased responsibility on allied and other cooperating countries for helping to prevent controlled goods from reaching proscribed destinations.

In their recommendations, ECAT companies are reflecting on and identifying four basic shortcomings of the current national security export control system. First, the system is premised on unrealistic assumptions regarding the ability of the United States to control the diffusion of advanced products in the West. While in the postwar period, U.S. control of advanced products was virtually total, today the control of the United States over the movement of advanced products in the West is shared with a number of other countries in Europe and Asia. Accordingly, a number of the proposals ECAT recommends reflect the new reality of shared dominance over the spread of advanced products in the West. One of these proposals would establish all governmental organizations and government-controlled organizations in CoCom as eligible to receive goods under a special license with no performance limits.

A second shortcoming of the national security export control system is that many controls cover products that are generally available in the West but are not subject to control by other Western nations. To avoid subjecting themselves to the vagaries of the U.S. export control system, Western purchasers are beginning to steer away from the purchase of American products. Secretary of Commerce Malcolm Baldrige has begun to talk about the resultant "de-Americanization" of products.

It is absolutely critical that steps be taken to reverse this erosion in the competitiveness of U.S. products in world, and especially Western markets. In ECAT's view, a crucial first step would be to establish and implement, as part of the U.S. national security export control system, a clear and unambiguous concept of Western foreign availability under which products that are available in other Western countries and that are below a demonstrated technology level could be shipped under general license to Western bloc countries.

It would become the burden of the administration to prove that such products are not available from other Western countries as a condition of imposing U.S. export controls. Establishment of this presumption for export below a demonstrated technology level forms one of the principal legislative recommendations of the ECAT companies.

A third shortcoming of the system is the extraterritorial application of controls that leads foreign purchasers to shun U.S. product. The United States in addition to applying controls on a variety of shipments to friendly nations also requires further re-export licenses for transshipments of these same products within the Western world.

Foreign customers of U.S. products are tiring particularly of this U.S. re-export licensing requirement and are switching their purchases to non-U.S. suppliers, in order to avoid the uncertainties of being subject to U.S. export control authorities. A Belgian purchaser of a U.S. product, for example, does not want to be prevented from selling the U.S. product to his French customer. Since most of the products concerned are fully available from non-U.S. suppliers, whose governments do not maintain re-export controls, it makes more commercial sense, in their view, not to deal with the United States in such instances.

Sales that are lost to ECAT and other U.S. companies lead to lower profits and reduced funding for the R&D which is essential if American companies are to maintain their competitiveness. The cost of applying U.S. export control regulations extraterritorially to our Common Market allies, I hasten to add, will mount as they begin to achieve their goal of the free flow of goods within the Common Market by 1992. For these reasons, ECAT companies recommend limiting the extraterritorial application of U.S. export and re-export controls.

A fourth shortcoming of the U.S. national security export control system is that it does not discriminate adequately between advanced products and low technology items. ECAT, accordingly, recommends that the shipment of low level items in the West be eliminated from U.S. export controls.

The shortcomings of the export control system requiring corrective action are not limited to these national security aspects. There are also, as Senator Heinz suggested, a number of problems with foreign policy aspects of the system, as well.

ECAT companies, first of all, believe that the executive has failed to make use of diplomatic alternatives to foreign policy export controls. Frequently, these controls are maintained unilaterally and for largely symbolic reasons. The products that U.S. companies are prohibited from supplying are sold by foreign competitors. In many such situations, a diplomatic alternative to foreign policy export controls could have the same symbolic impact at a lower cost to U.S. interests, as has been suggested by the General Accounting Office. ECAT companies believe it would be appropriate for the Congress to direct the executive to make greater use of diplomatic alternatives in lieu of foreign policy export controls.

A second shortcoming is the failure of the executive to follow, as we believe Congress intended in the 1985 reauthorization of the Export Administration Act, the procedures and criteria in the act for imposition of foreign policy export controls. The executive has been imposing controls under the authorities of the International Emergency Economic Powers Act. ECAT believes that the committee should consider conforming the International Emergency Economic Powers Act to the EAA as regards the procedures and criteria for imposing foreign policy export controls. We support the specific recommendations of S. 547.

In summary, Mr. Chairman, the shortcomings of the export control system—both for national security and foreign policy reasons—have seriously weakened the ability of U.S. firms to compete in the West. The problem requires the attention of the Congress and the administration. We in ECAT have shared our recommendations with the administration. We are very appreciative of this opportunity to share them with the committee and look forward to continuing work with this committee on finding solutions to the shortcomings in the system which ECAT has identified.

Thank you.

[The complete prepared statement of Calman J. Cohen follows:]

American Electronics Association

AEA Legislative Proposals on Export Controls -- February, 1987

REEXPORT CONTROLS

(a) Eliminate reexport controls on U.S. products reexported to, within or among COCOM or 5(k) countries, but provide an exception for high-level goods not eligible for bulk licensing.

(b) Eliminate reexport controls on U.S.-origin parts and components contained in foreign products to be exported to countries other than COCOM or 5(k) when the parts and components constitute 20 percent or less in value of the product.

(c) Amend the description of a general license to include reexports under such license of U.S.-origin goods.

Suggested Language:

> (a) and (b) Section 5(a) of the Act is amended by adding at the end the following:
>
> "(4) No authority or permission to reexport any goods subject to the jurisdiction of the United States may be required--
>
> (A) to or within any country which maintains export controls on such goods cooperatively with the United States pursuant to the agreement of the group known as the Coordinating Committee or pursuant to an agreement described in subsection (k) of this section, except that the Secretary may require a license for the reexport of goods not eligible for licenses authorizing multiple exports pursuant to section 4(a)(2) to such end users as the Secretary shall specify by regulation, or
>
> (B) from any country when the goods to be reexported are incorporated in other goods and
>
> > (i) no license is required for the export from the United States of either the goods or the products into which they are incorporated;
> >
> > (ii) the value of the United States content of the products into which the goods are incorporated is 20 percent or less; or
> >
> > (iii) the goods are spare parts accompanying United States origin components in a foreign made product and do not exceed the value of the United States content in the product."
>
> (c) Section 4(a)(3) of the Act is amended to read as follows:

> "(3) A general license, authorizing exports and reexports, without application by the exporter or reexported."

Remarks: Solving the reexport control problem is critical for AEA members. This language is similar to the reexport control provisions in H.R. 3, but differs in several respects:

(1) H.R. 3 permits reexports of U.S. finished goods from COCOM nations to any country (other than the Bloc or the PRC) without prior U.S. approval. Reexports are permitted within COCOM as well. Since allowing reexports to any free world destination may pose a security threat, this proposal allows reexports of all but the most sophisticated U.S. finished goods within and among COCOM and 5(k) countries.

(2) Reexports of U.S.-origin parts and components contained in foreign products to be exported to countries other than COCOM 5(k) countries would be permitted without specific U.S. authorization if the value of the U.S. parts and components is 20% or less than the total value of the finished product. H.R. 3 specifies this percentage or a value of $10,000, whichever is less.

(3) For certain reexports to destinations outside of the COCOM and 5(k) countries, the general license description is amended to permit reexports by foreign entities without specific U.S. approval of each reexport. (The underlined portions denote change to existing law.)

DECONTROL LOW LEVEL ITEMS

(a) Extend the G-COM procedures (decontrol of technology below AEN level) for exports (and reexports) to all free world countries.

(b) For exports to COCOM and 5(k) countries, raise the G-COM level to the PRC green line level, thereby decontrolling exports of technology below this level to these countries.

Suggested language:

> (a) Section 5(b)(2) of the Act is amended to read as follows:
>
> "(2) No authority or permission to export may be required under this section before goods or technology are exported to countries other than controlled countries if the export of the goods or technology to controlled countries requires only notification of the participating governments of the Coordinating Committee."
>
> (b) After section 5(b)(2) add the following new paragraph:

"(3) No authority or permission to export may be required under this section before goods or technology are exported to a country which maintains controls cooperatively with the United States pursuant to the agreement of the group known as the Coordinating Committee if the export of the goods or technology to the People's Republic of China requires only notification of the participating governments of the Coordinating Committee."

Remarks: According to data presented in the NAS study, the full implementation of these provisions would eliminate the need for approximately 45% of all individual validated licenses (IVLs) per year (about 54,000) which constitute some 62% in value of all IVL exports. The recommendation in part (a) is almost identical to the provision in H.R. 3. This language does not use the term "level of performance characteristics" found in H.R. 3 since this phrase has proven difficult for the Commerce Department to interpret thus hindering needed decontrol. Part (b) is not included in H.R. 3 and is designed to further decontrol exports to COCOM of items that are not critical.

FOREIGN AVAILABILITY

(a) Require that the uncontrolled availability of goods and technology in free world countries be sufficient grounds for making a foreign availability determination.

(b) Require the Secretary of Commerce to license exports (without the possibility of a Presidential veto) to any free world destination if the end user can obtain the item from another source.

Suggested language:

(a) Section 5 of the Act is amended by adding at the end the following:

"(r) Availability Defined. -- For purposes of subsections (d), (f), and (h) of this section, the term "available in fact to controlled countries" includes availability of any goods or technology in any country --

(1) from which the goods or technology is not restricted for export to any controlled country; or

(2) in which such export restrictions are determined by the Secretary of Commerce to be ineffective."

(b) Section 5(f)(2) is amended to read as follows:

"(2) The Secretary shall approve any application for a validated license which is required under this section for the export of any goods or technology to a particular country and which meets all other requirements for such an

application, if the Secretary determines that such goods or technology will, if the license is denied, be available in fact to such country from sources outside the United States, including countries which participate with the United States in multilateral export controls, in sufficient quantity and of comparable quality so that denial of the license would be ineffective in achieving the purpose set forth in subsection (a) of this section. In the case of exports to controlled countries, the Secretary's determination shall be subject to the exception set forth in paragraph (1) of this subsection. In any case in which the Secretary makes a determination of foreign availability under this paragraph with respect to any goods or technology, the Secretary shall determine whether a determination of foreign availability under paragraph (1) with respect to such goods or technology is warranted."

Remarks: This language is intended to provide U.S. exporters greater access to Western markets. Part (a) is identical to the provision in H.R. 3. Changes to existing law are underlined in part (b).

PUBLISHING FOREIGN AVAILABILITY ALLEGATIONS

Require the Secretary of Commerce to acknowledge the receipt of foreign availability allegations from industry and publish in the Federal Register within 30 days the action the Secretary has taken on the allegation. Allow a maximum of seven months for the Secretary to make a decision.

Suggested language:

Section 5(f)(3) of the Act is amended by adding after the second sentence the following:

"In a case in which any allegation is received from an export license applicant, the Secretary shall respond in writing to the applicant, and publish in the Federal Register, within 30 days after receipt of the allegation, that --

(A) the foreign availability does exist and the requirement of a validated license has been removed or the applicable steps are being taken under paragraph (4) or (5);

(B) the foreign availability may exist but further examination of the issue is necessary in order to make a determination; or

(C) the foreign availability does not exist.

In the case in which subparagraph (B) applies, the Secretary shall, within 6 months after the initial response and publication, respond in writing to the applicant and publish in the Federal Register, that --

(i) the foreign availability does exist and the requirement of a validated license has been removed or the applicable steps are being taken under paragraph (4) or (5); or

(ii) the foreign availability does not exist.

In any case in which the publication is not made within that 6-month period, the Secretary may not require a license for the export of the goods or technology with respect to which the foreign availability allegation was made."

Remarks: This language, which is identical to H.R. 3, requires the Commerce Department to act on foreign availability allegations received from industry.

DISTRIBUTION LICENSE

Permit use of a distribution-type license for certain exports to the People's Republic of China.

Suggested language:

> Section 4(a)(2)(A) of the Act is amended in the first sentence by inserting "(except the People's Republic of China)" after "controlled countries."

Remarks: The language is identical to H.R. 3. It is expected that a DL for exports to the PRC will specify rights and responsibilities that are somewhat different from those specified in the existing DL regulations.

INDUSTRY REPRESENTATIVE TO COCOM

Require that the U.S. delegation to COCOM control list meetings include (either officially or unofficially) representatives of U.S. industry who are knowledgeable about the items being reviewed.

Suggested language:

> Section 5(i)(1) of the Act is amended by adding at the end the following:
>
> "The President shall appoint advisors who are representatives of industry to accompany the U.S. delegation to the list review meetings of the Coordinating Committee. These advisors shall be knowledgeable with respect to the items being reviewed and may include members of the technical advisory committees established pursuant to section 5(h)."

Remarks: This language is similar to the provision in H.R. 3. The paragraph attempts to indicate that the industry advisors need not be official representatives of the U.S. government but rather technical advisors to the U.S. delegation. The AEA Export Control Committee was informed by representatives of the State Department that foreign governments often bring such advisors to COCOM meetings.

UNILATERAL CONTROLS

Require the Secretary of Commerce to review, on an annual basis, all U.S. unilateral controls, to delete those that are no longer appropriate, and to publish a list of remaining controls in the Federal Register together with a specific justification for each control. In addition, require the Secretary to report to Congress on the steps being taken to achieve multilateral status for the remaining unilateral controls.

Suggested Language:

> Section 5(c) of the Act is amended by adding at the end the following:
>
> "(4) Pursuant to the review procedures in (3), the Secretary shall eliminate each year all items on the control list maintained unilaterally by the United States except for controls on goods or technology in which foreign availability does not exist or which the United States is actively pursuing negotiations to achieve multilateral cooperation. The Secretary shall publish in the Federal Register each year a list of those unilateral controls that are not eliminated together with a specific justification for each such control and report to Congress the steps that are being taken to gain multilateral cooperation."

Remarks: This provision, not contained in H.R. 3, is designed to sunset all unilateral controls except those that can be justified based upon current data.

TECHNICAL ADVISORY COMMITTEES

Require that TAC chairpersons present the TAC's findings in the interagency review process and report to the TAC the actions that are taken on the TAC's recommendations and the reasons for those actions.

Suggested language:

> Section 5(h) of the Act is amended by inserting after paragraph (3) the following new paragraph and by renumbering subsequent paragraphs accordingly:
>
> "(4) Each technical advisory committee submitting recommendations to an interagency review process shall be represented by its Chairman in that portion of the process dealing with its proposals. The Chairman will present his committee's views and otherwise participate in developing a U.S. position. In addition, he shall report to his

committee the disposition of its recommendations and the reasons why they were accepted, modified or rejected."

Remarks: TAC recommendations are often "lost" in the bureaucratic process. This provision is designed to help ensure that TAC recommendations are actually considered by U.S. policy makers. This provision is not contained in H.R. 3.

GOODS CONTAINING MICROPROCESSORS

Clarify the existing provision in law regarding the decontrol of certain goods containing embedded microprocessors to fully implement the intent of Congress. Expand the provision to include other embedded components.

Suggested language:

Section 5(m) is amended to read as follows:

"(m) GOODS CONTAINING MICROPROCESSORS AND COMPONENTS--Export controls may not be imposed under this section or any other provision of law on a good solely on the basis that the good contains controlled parts or components if such parts or components are essential to the functioning of the good, are customarily included in sales of the good in non-controlled countries, and comprise less than 35% of the value of the good; unless the good itself, if exported, would by virtue of the functional characteristics of the good as a whole make a significant contribution to the military potential of a controlled country which would prove detrimental to the national security of the United States."

Remarks: This language broadens the existing law regarding microprocessors, and attempts to clarify that a good shall be controlled based upon its overall functional characteristic and not solely on its component parts. This provision is not contained in H.R. 3.

NEGOTIATIONS WITH OTHER COUNTRIES

Establish the following U.S. objectives for negotiating multilateral and bilateral agreements:

(a) Create an export/reexport license-free zone within COCOM and other cooperating countries by 1990;

(b) Raise the national discretion level for low-level technology exports to free-world countries;

(c) Raise the green line level for exports to the PRC.

Suggested language:

Section 5(k) of the Act is amended to read as follows:

"(k) NEGOTIATIONS WITH OTHER COUNTRIES.--(1) The Secretary of State, in consultation with the Secretary of Commerce, the Secretary of Defense, and the heads of other appropriate departments and agencies, shall he responsible for conducting negotiations with other countries including those countries not participating in the group known as the Coordinating Committee, regarding their cooperation in restricting the export of goods and technology in order to carry out the policy set forth in section 3(9) of this Act, as authorized by subsection (a) of this section, including negotiations with respect to which goods and technology in order to carry out the policy set forth in subsection (a) of this section, including negotiations with respect to which goods and technology should be subject to multilaterally agreed export restrictions and what conditions should apply for exception to those restrictions.

(2) In conducting negotiations referred to in paragraph (1), it shall be the objective of the United States to:

(A) eliminate by 1990 the requirement for validated licenses for exports and authorizations for reexports to countries party to bilateral and multilateral agreements provided such agreements require participating governments to maintain controls to nonparticipating countries that meet the objective set forth in section 3(2)(A) of the Act;

(B) increase the level of performance characteristics under which goods and technology may be exported to controlled countries (other than the People's Republic of China) with only the requirement that the Coordinating Committee be notified of such exports.

(C) increase the level of performance characteristics under which goods and technology may be exported to the People's Republic of China with only the requirement that the Coordinating Committee notified of such exports; and

(3) In cases where negotiations referred to in paragraph (1) produce agreements on export restrictions comparable in practice to those maintained by the Coordinating Committee, the Secretary shall treat exports, whether by individual or multiple licenses, to countries party to such agreements in the same manner as exports to members of the Coordinating Committee are treated, including the same manner as exports are treated under subsections 5(b)(3) and 10(o) of this Act."

Remarks: The export control process is often so complex that it becomes easy to lose sight of policy goals. This language, which is not included in H.R. 3, is intended to specify near term objectives of the U.S. control system. Underlined portions denote changes to existing law.

Emergency Committee for American Trade 1211 Connecticut Ave Washington DC 20036 (202) 659-5147

STATEMENT OF CALMAN J. COHEN, VICE PRESIDENT, EMERGENCY COMMITTEE FOR AMERICAN TRADE, BEFORE THE BANKING, HOUSING AND URBAN AFFAIRS SUBCOMMITTEE ON INTERNATIONAL FINANCE HEARING ON EXPORT CONTROL PROPOSALS

Tuesday, March 17, 1987

Mr. Chairman, I am Calman J. Cohen, Vice President of the Emergency Committee for American Trade. I am pleased to be with you today to present the export control proposals of the Emergency Committee for American Trade (ECAT).

ECAT is an organization of the chief executive officers of 60 American firms which are among the principal exporters of the United States. With over $700 billion in worldwide sales and nearly five million employees, ECAT firms have a vital interest in the design and operation of the U.S. system of export controls.

ECAT companies take no issue with the imposition of export controls for reasons of the national interest, whether they are for reasons of national security, foreign policy, or short supply. They recognize that while such controls may adversely impact their ability and that of other U.S. companies to conduct international business, the overriding national security and foreign policy interests of the nation may in certain situations require the U.S. government to impose export controls.

ECAT companies are of the view, however, that the current system of national security and foreign policy export controls suffers from serious shortcomings. These shortcomings undermine the effectiveness

of the control system itself and unnecessarily harm not only the ability of ECAT and other U.S. firms to do business in the West but their very competitiveness as well.

With this problem in mind, an ECAT task force was established to develop a set of recommendations concerning U.S. export controls on items traded among free world nations. The full set of their recommendations appears at the conclusion of this statement. Many of them could be implemented through actions taken by the Administration. Some would require legislative action, such as that contemplated in S. 547.

The recommendations developed by the ECAT task force are designed to further the international competitiveness of U.S. industry in Western markets through encouraging foreign purchases of U.S. products. Furthermore, the changes in the control system proposed by the Task Force should not undermine our nation's security but should strengthen the industrial competitiveness from which it arises and from which it must continue to draw strength. In addition, the recommendations of the Task Force take the view that ECAT and other firms have been doing their part to prevent controlled goods from reaching proscribed destinations. Their efforts must be reinforced by government-sponsored changes in the export control system which place increased responsibility on allied and other cooperating countries for helping to prevent controlled goods from reaching proscribed destinations.

In their export control recommendations, ECAT companies identify four basic shortcomings of the current system of national security

Senator SARBANES. Thank you very much, Mr. Cohen.
Mr. Hough.

STATEMENT OF CHARLES HOUGH, SCIENTIFIC APPARATUS MAKERS ASSOCIATION, DIRECTOR, EXPORT ADMINISTRATION, HONEYWELL CORP., MINNEAPOLIS, MN

Mr. HOUGH. Thank you, Mr. Chairman.

My name is Charles Hough, director of Import-Export Administration for Honeywell Corp. I am appearing today on behalf of the Scientific Apparatus Makers Association [SAMA], where I am chairman of their Export Administration Task Group.

SAMA is a trade association representing the scientific, clinical and process control instruments industry. SAMA has 230 member companies, many of them of moderate to small size, who manufacture and distribute high technology instruments and related laboratory equipment. These products are used for research, production, quality control, and for regulatory compliance by a wide range of industries as well as by government, universities and hospitals.

Overseas sales account for approximately 35 to 40 percent of SAMA members' total sales; however, that trade balance is steadily declining, due to the availability of an increasing number of foreign-made, state of the art instruments at competitive prices.

EXCESSIVE U.S. EXPORT CONTROLS

A recent National Academy of Sciences report documents how excessive U.S. export controls have cost the U.S. instruments industry millions of dollars in sales and have undermined our international competitiveness. When unilateral U.S. export controls on analytical instruments were revised early in 1984, U.S. exports of these instruments increased by roughly 7 percent; however, when the relaxation of these U.S. controls was reversed at the end of 1984, the U.S. exports of analytical instruments fell 12 percent below what they would have been if the licensing requirements had not been reimposed.

Translated into dollars, the reimposition of export controls could cost our industry between $550 million and $600 million per year.

Our written statement lists five recommended changes to the Export Administration Act which would help U.S. instrument companies become more internationally competitive, while continuing to protect our national security; however, I would like to focus my oral comments on the need to update section 5(m) of the act to reflect today's technology. Congress enacted section 5(m) in 1985, with the intention to decontrol goods such as instruments which are controlled solely because they contain an embedded microprocessor, even though the overall function of the good does not merit control.

While section 5(m) was initially helpful to U.S. instrument exporters, technological advances have occurred in the years since that provision was adopted. In the past, both U.S. instrument companies and their foreign competitors used proprietary embedded microprocessors to operate their products; however, the trend in recent years is for instrument companies to use off-the-shelf microprocessors or personal computers in their instruments.

Often these microprocessors or personal computers are subject to export controls, if they were sold separately, and as a result many instruments are again subjected to export controls, even though the overall function of the device does not merit control.

Mr. Chairman, I would like to give you an example to illustrate this point.

On the chair, we have a Honeywell digital control programmer, Model DCP 7700. Incidentally, made in Fort Washington, PA. The product is designed to program and control temperatures in batch processes. It is used on heat-treating furnaces, ovens, kilns, and environmental chambers. And in addition to controlling temperatures, this unit can also program other set points, including pressure and flow.

For export control purposes, this programmer is classified as a general license commodity. This means it is considered nonstrategic and not of particular military significance. It may be freely exported to all countries except the totally embargoed countries, as long as the customer is not on the Commerce Department's denied parties' lists or the Treasury Department's specially designated nations list.

This programmer utilizes a microprocesser with a very slow data processing date. However, if the product were updated to incorporate a faster processor, it would require an individual validated export license, even though the essential functionality would not be changed. While it might process data and provide readouts more quickly, it still would only perform the functions for which it was designed.

At this point, I would like to give you an idea of the costs involved here.

COSTS

The microprocesser currently used in this instrument costs about $3. A state of the art microprocessor, which would bring it back under export controls and require a validated licensing, would cost about $9. The total unit costs $5,000.

Our proposed amendment will update section 5M to reflect today's technology and decontrol goods like this programmer, which may fall under National Security Export Controls solely because they incorporate a controlled good.

If section 5M is not updated, U.S. instrument companies will lose many export sales opportunities, since their products will be subject to lengthy and uncertain U.S. export licensing requirements simply because they contain or incorporate microprocessors in personal computers.

In the meantime, our foreign competitors can ship freely to markets throughout the world. Their governments take the position that individual items lose their identity when they're embedded or incorporated into otherwise uncontrolled goods.

Thus, national security will not be enhanced if this section is not updated, since comparable instruments will still be available from foreign sources.

The text of our proposed amendment to update section 5M is included in our written statement. The three criteria allow U.S. instrument companies to be competitive in world markets and to compete on an equal footing with our foreign competitors, while assuring that highly sensitive computer components do not escape legitimate U.S. national security export license review.

However, as a further protection of our national security, an instrument which meets the three criteria, nevertheless, may still be controlled if the Secretary of Commerce determines that the functional characteristics of the instrument are such that its export would make a significant contribution to the military potential of a controlled country.

Mr. Chairman, we appreciate this opportunity to present our views. We commend the subcommittee for its effort and look forward to working with you on these important issues.

[The complete prepared statement of Charles R. Hough follows:]

export controls. First, the system is premised on unrealistic assumptions regarding the ability of the United States to control the diffusion of advanced products in the West. While in the postwar period, U.S. control of advanced products was virtually total, today the control of the United States over the movement of advanced products in the West is shared with a number of other countries in Europe and Asia. As a result, the capacity of the United States to unilaterally control the movement of advanced products in the West is becoming more and more limited year by year. A number of the export control proposals that ECAT recommends reflect the new reality of shared dominance over the spread of advanced products in the West. One of those proposals would establish all governmental organizations and government-controlled entities in CoCom and other cooperating countries as eligible to receive goods under a special license with no performance limits.

A second shortcoming of the national security export control system is that many controls cover products that are generally available in the West but that are not subject to control by other Western nations. To avoid subjecting themselves to the vagaries of the U.S. export control system, Western purchasers are beginning to steer away from the purchase of American products. Indeed, Secretary of Commerce Malcolm Baldrige has begun to talk about the resultant "de-Americanization" of products.

It is absolutely critical that steps be taken to reverse this erosion in the the competitiveness of U.S. products in world markets.

A crucial first step would be to establish and implement as part of the U.S. national security export control system a clear and unambiguous concept of Western foreign availability under which products that are available in other Western countries and that are below a demonstrated technology level could be shipped under general license to Western bloc countries. Below a demonstrated technology level, it would become the burden of the Administration to prove that such products are not available from other Western countries as a condition of imposing U.S. export controls. This proposal forms one of the principal legislative recommendations of the ECAT companies.

A third shortcoming of the system is the extraterritorial application of U.S. controls on exports and re-exports to CoCom and other cooperating countries that leads foreign purchasers to shun U.S. product. The United States in addition to applying export controls on a variety of shipments to friendly nations also requires further re-export licenses for transhipments of these same products within the Western world. Foreign customers of U.S. products are tiring particularly of this U.S. re-export licensing requirement and are switching their purchases to non-U.S. suppliers in order to avoid the uncertainties of being subject to U.S. export control authorities. A Belgian purchaser of a U.S. product, for example, does not want to be prevented from selling the U.S. product to his French customer. Since most of the products concerned are fully available from non-U.S. suppliers whose governments do not maintain re-export controls, it makes more commercial sense not to deal with the United States in such instances.

Sales that are lost to ECAT and other U.S. companies lead to lower profits and reduced funding for the research and development which is essential if American companies are to maintain their competitiveness in Western markets. In addition, extraterritorial application of U.S. export and re-export controls generates further friction with CoCom and other cooperating countries, further reducing their interest in purchasing U.S. goods. The costs of applying U.S. export control regulations extraterritorally to our Common Market allies will mount as they begin to achieve their goal of the free flow of goods within the the Common Market by 1992.

For these reasons, ECAT companies recommend limiting the extraterritorial application of U.S. export and re-export controls on shipments to CoCom and other cooperating countries. ECAT supports proposals for the adoption of a worldwide de minimus level for control of U.S. origin parts and components contained in foreign produced products as well as the elimination of U.S. controls on internal (in-country) transfers in CoCom and other cooperating countries.

A fourth shortcoming of the U.S. national security export control system is that it does not discriminate adequately between advanced product and low technology items. By seeking equally to control the diffusion of both advanced products and low technology items in the West, the system long ago became an exercise in paperwork that is wasteful of resources -- of those of the government which must review license applications and those of the private sector which must submit

them. According to the recent study released by the National Academy of Sciences, the system of national security export controls is so misunderstood that a major portion of individual license applications submitted by U.S. firms is for items that are not under control. ECAT companies believe that it is absolutely necessary that the shipment of low level items in the West be eliminated from U.S. export controls.

The shortcomings of the export control system requiring corrective action are not limited to its national security aspects. There are a number of problems with foreign policy aspects of the system as well.

First, ECAT companies believe that the Executive has failed to make adequate use of diplomatic alternatives to foreign policy export controls. Frequently, foreign policy export controls are maintained unilaterally and for largely symbolic reasons. The products that U.S. companies are prohibited from supplying are sold by foreign competitors. In many such situations, a diplomatic alternative to foreign policy export controls could have the same symbolic impact at a lower cost to U.S. interests, as suggested by the General Accounting Office in its August 1986 "Assessment of Commerce Department's Foreign Policy Report to Congress." ECAT companies believe it would be appropriate for the Congress to direct the Executive to make greater use of diplomatic alternatives in lieu of foreign policy export controls.

A second shortcoming is the failure of the Executive to follow, as we believe Congress intended, the procedures and criteria in the Export Administration Act (EAA) for imposition of foreign policy export controls. The Executive has been imposing controls under the authorities of the International Emergency Economic Powers Act. ECAT believes that the Committee should consider conforming the International Emergency Economic Powers Act to the EAA as regards the procedures and criteria for imposing foreign policy export controls.

In summary, the shortcomings in the export control system -- both for national security and foreign policy reasons -- have seriously weakened the ability of U.S. firms to compete in Western markets. The problem requires the attention of the Congress and the Administration.

ECAT has shared its Task Force proposals with the Administration. We appreciate this opportunity to share them with the Committee. The President announced in his competitiveness initiative that the Cabinet is to complete a review of the export controls program by early March. Some of the ECAT Task Force recommendations on export controls are among the reforms which the Cabinet has been directed by the President to find ways to implement and still others are found in Secretary Baldrige's EAA reform announcement of February 9, 1987. The announced reforms, however, require the issuance of rules and regulations that will require the concurrence of other agencies as well as legislative action so that the reform battle is hardly over. We look forward to working with the Committee.

* * * * *

The full set of recommendations of the ECAT Task Force on Export Controls appears below. They are divided into two categories. The first concerns controls for national security purposes and the second concerns controls for foreign policy purposes.

The Task Force proposals in the area of national security controls are as follows:

Actions recommended to be taken by the Administration:

-- Limit the extraterritorial application of U.S. export and re-export controls on shipments to CoCom and other cooperating countries.

  o Adopt a meaningful, worldwide de minimus level for control of U.S. origin parts and components contained in foreign-produced products below which re-export controls would not be required. The Commerce Department should consider the positive industry recommendations and implement the proposed revision of controls on U.S. origin parts and components published in the July 7, 1986, Federal Register.

  o Eliminate U.S. controls on internal (in-country) transfers in CoCom and other cooperating countries. The U.S. government should be encouraged to continue to work out on a government-to-government basis bilateral agreements under which foreign governments take responsibility for policing the internal movement of high-performance goods. The maintenance by the United States of unilateral controls on internal transfer invites further friction with our Common Market allies who have set for their goal the achievement of the free flow of goods within the Common Market by 1992.

-- Designate all governmental organizations and government-controlled entities in CoCom and other cooperating countries as eligible to receive goods under the certified end-user license with no performance limits.

-- Encourage the Commerce Department to establish procedures for submission of proposals to update the technical parameters for items eligible for the distribution license and to review the appropriate portions of Supplement 1 of Part 373 of the Export Administration Regulations, deleting or modifying those commodity categories no longer appropriate for inclusion.

-- Expand the Green Zone through CoCom negotiations for the People's Republic of China, recognizing the special relationship between the United States and the People's Republic of China.

Action recommended to be taken by the Congress:

-- Amend the foreign availability provisions of the EAA to direct the Administration to establish rules allowing the export of U.S. products not subject to either bilateral or multilateral export controls and that are available in other Western countries and that are below a demonstrated technology level, i.e. the highest provable level of foreign availability in a product category. Such products should be allowed to be shipped under general license to Western bloc countries. Under this recommendation, it would be the burden of the Administration to prove that such products are not available from other Western countries as a condition of imposing U.S. export controls.

-- Curb the extraterritorial application of U.S. export and re-export controls:

o Eliminate such controls on lowest-level items, i.e., items eligible for Administration Exception Notification.

o Eliminate intra-country controls within CoCom and cooperating countries.

The Task Force Proposals in the area of foreign policy controls are as follows:

Actions recommended to be taken by the Administration:

-- The Administration should attempt to meet the spirit of the export control directives of the Congress and to make meaningful foreign availability determinations as a precondition of imposing foreign policy export controls in order both to preserve foreign market opportunities for U.S. exporters and to help maintain their deserved reputation as reliable suppliers.

-- The Administration should use diplomatic alternatives to foreign policy export controls, such as those recommended by the General Accounting Office in its August 1986 "Assessment of Commerce Department's Foreign Policy Report to Congress."

-- The Administration should acknowledge that any imposition of foreign policy export controls be pursuant to the authorities of the Export Administration Act and adhere to the Export Administration Act requirements for foreign policy export controls.

Actions recommended to be taken by the Congress:

-- Encourage Congressional oversight of the Administration's imposition of controls under the International Emergency Economics Powers Act in lieu of the Export Administration Act.

-- Discourage imposition of ineffective unilateral foreign policy controls by conforming the International Emergency Economic Powers Act to the EAA as regards the criteria for imposing foreign foreign policy export controls.

TESTIMONY
OF THE
SCIENTIFIC APPARATUS MAKERS ASSOCIATION
ON EXPORT CONTROL ISSUES
PRESENTED BY
CHARLES R. HOUGH
DIRECTOR, IMPORT/EXPORT ADMINISTRATION
HONEYWELL, INC.
AND CHAIRMAN,
SAMA EXPORT ADMINISTRATION TASK GROUP

BEFORE THE
INTERNATIONAL FINANCE AND MONETARY POLICY SUBCOMMITTEE
OF THE
COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS

March 17, 1987

Good morning Chairman Sarbanes and distinguished members of the International Finance and Monetary Policy Subcommittee. My name is Charles R. Hough. I am Director of Import/Export Administration for Honeywell, Inc. I am appearing before you today in my capacity as Chairman of the Export Administration Task Group of the Scientific Apparatus Makers association ("SAMA"). Founded in 1918, SAMA is the national trade association of the high technology scientific, clinical and process control instruments industry. SAMA's 230 member companies, many of moderate or small size, manufacture and distribute more than 40,000 types of high technology instruments and related products. That equipment is used for research, production and quality control and for environmental compliance by a wide range of industries, including chemical and pharmaceutical manufacturing, oil refining and food processing. Scientific instruments also are employed in scientific and medical research by hospitals, universities and government agencies including NIH and EPA. SAMA's members have combined annual sales in excess of $14 Billion, and overseas sales account for between 35-40% of total sales. The United States currently maintains a positive balance of trade in scientific, clinical and process control instruments. However, that trade balance is steadily declining due to the availability of an increasing number of foreign-made state-of-the-art instruments at competitive prices.

SAMA's members are acutely aware of the sales that they have lost to foreign instrument companies because of excessive U.S. export controls. The recent National Academy of Sciences report documents the extent to which U.S. export controls have undermined our international competitiveness. According to the National Academy of Sciences, when unilateral controls on analytical instruments were relaxed early in 1984, U.S. exports of analytical instruments increased by roughly 7% over what they otherwise would have been. However, when that relaxation of U.S. controls was reversed at the end of 1984, U.S. exports of analytical instruments fell 12% below what they would have been if licensing requirements have not been reimposed. Translated into dollars, the 12% decline in sales cost our industry between $550 million and $600 million in lost export sales per year.

Summary of Position

SAMA supports the Subcommittee's efforts to refine our national security export controls to eliminate unilateral and unnecessary controls, reduce the length and uncertainty of the export licensing process for high technology products while continuing to protect our national security. We support the following changes to the Export Administration Act to improve the international competitiveness of U.S. companies and to protect our national security:

1) Update Section 5(m) of the Export Administration Act (Act) to decontrol goods such as scientific, clinical and process control instruments that are controlled solely because they incorporate controlled goods such as microprocessors and personal computers.

2) Clearly establish the Department of Commerce as the Agency responsible for conducting "foreign availability" determinations and implementing appropriate actions on a finding of "foreign availability," and extending the foreign availability determination process to include the uncontrolled availability of goods and technology in Free World countries.

3) Refine and strengthen the mechanism set out in the Act for resolving inter-agency disputes.

4) Eliminate re-export control on U.S.-origin parts and components incorporated into foreign manufactured goods when the U.S. parts and components comprise 35% or less of the value of the finished goods.

5) Improve the use of distribution licenses especially for certain exports to the Peoples Republic of China.

1. Updating Section 5(m)

Unlike other products, many scientific and process control instruments are subject to U.S. national security export controls solely because they contain controlled goods such as microprocessors and personal computers. Congress enacted Section 5(m) (Goods Containing Embedded Microprocessors) of the Export Administration Act in 1985 to decontrol goods such as instruments that contain embedded microprocessors when the overall function of the good does not merit control. While initially helpful to U.S. instrument exporters, technological advances have occurred since that provision was enacted. Instead of using proprietary embedded microprocessors to operate their products, the growing trend among both U.S. and foreign instrument companies is to buy commercial microprocessors and personal computers and to incorporate those goods in their instruments. Typical of the kinds of instruments affected by this change in technology are thermal analyzers, spectrophotometers, many medical instruments such as hematology analyzers and obstetrical monitoring systems, and many process controllers such as those used to control temperatures in chemical and pharmaceutical manufacturing.

As a result, Section 5(m) needs to be updated to reflect today's technology. If it is not updated, U.S. instrument companies will lose many export sales opportunities solely because their products are subject to lengthy and uncertain U.S. export licensing requirements because they contain microprocessors and personal computers, while our foreign competitors can ship freely to markets throughout the world. Our national security will not be enhanced if we fail to update Section 5(m) since the East in any event will be able to obtain comparable instruments and controlled components from certain of our foreign competitors who take the position that individual items lose their identity when they are incorporated with an otherwise uncontrolled good.

Section 5(m) of the Export Administration Act should be amended to read as follows:

> "(m) GOODS INCORPORATING CONTROLLED GOODS. -- Export controls may not be imposed under this section on a good solely on the basis that the good incorporates controlled goods, if such controlled goods are essential to the functioning of the good, are customarily included in sales of the good in non-controlled countries, and comprise less than 35 percent of the value of the good, unless the good itself, if exported, would by virtue of the functional characteristics of the good as a whole make a significant contribution to the military potential of a controlled country which would prove detrimental to the national security of the United States."

The above language will update Section 5(m) and allow U.S., companies to compete on an equal footing with their foreign competitors. I would like to emphasize that the only instruments which would be affected by the proposed updating of Section 5(m) are those products that currently are subject to national security controls solely because they incorporate controlled goods. Instruments which are controlled for other reasons would not be affected.

"Controlled goods" under the above amendment would include both microprocessors and personal computers which are incorporated or embedded in a good such as a scientific instrument. Exports of those instruments would be decontrolled if each of the following three conditions is met.

1) the controlled goods (e.g., the microprocessor or personal computer) must be essential to the functioning of the good (e.g., the instrument). This means that the instruments must be incapable of operating for its intended uses as an instrument if the controlled good is removed.

2) the controlled goods must be customarily included in sales of the good in non-controlled countries. This ensures that an exporter would not be able to evade legitimate U.S. national security export controls by placing a highly sophisticated computer in a low level scientific instrument since such products are not "customarily" sold in the West. Thus, for example, companies would be unable to export a supercomputer without an export license by incorporating it in a digital thermometer, even if that were physically possible.

3) the controlled goods must comprise less than 35 percent of the value of the good. This criteria further protects against the Trojan Horse situation discussed in criteria #2, above. The 35 percent figure tracks the principal element test in the re-export control proposals pending in the Congress and within the Administration.

Further, an instrument which meets the three above criteria nevertheless may still be controlled if the Secretary of Commerce determines that the functional characteristics of the instruments are such that its export would make a significant contribution to the military potential of a controlled country.

2. Clearly establish the Department of Commerce as the government agency responsible for conducting "foreign availability" determinations and extend "foreign availability" determinations to the uncontrolled foreign availability of goods and technologies in free-world countries.

The "foreign availability" provisions of the Export Administration Act provide that export controls may be removed from U.S. goods and technology if comparable goods and technology are available from sources outside the United States in sufficient quantities and comparable in quality to those produced in the U.S. so as to render the U.S. controls ineffective in achieving their intended purpose. However, the Commerce Department's rules implementing this provision of the Act unreasonably limit "foreign availability" determinations to the availability of comparable goods and technology to the East from non-COCOM sources, even if an item is available in an uncontrolled manner in a free-world country. In addition, "foreign availability" determinations frequently are delayed in part because other government agencies in many instances do not respond in a timely manner to Commerce's request for input into "foreign availability" decisions. The net result is that industry disregards the "foreign availability" process.

The "foreign availability provisions of the Export Administration Act should be amended to specifically clarify that "foreign availability" includes products available in an uncontrolled manner in a Free-World country. This clarification of statutory intent could be accomplished be defining "available in fact to controlled countries" to include availability in Western countries in which there are no restrictions on exports to the Soviet bloc, or in which those restrictions are ineffective. Specifically, as proposed in H.R. 3, the following new subsection could be added to Section 5 of the Export Administration Act:

> "(r) Availability Defined. -- For purposes of subsections (d), (f), and (h) of this section, the term "available in fact to controlled countries" includes availability of any goods or technology in any country --
>
> (1) from which the goods or technology is not restricted for export to any controlled country; or
>
> (2) in which such export restrictions are determined by the Secretary of Commerce to be ineffective."

Further, the Act should be amended to clearly establish the Department of Commerce as the government agency responsible for conducting foreign availability determinations and for implementing appropriate actions on positive findings that foreign availability exists. Other Executive Branch agencies, such as the Defense Department, the Department of Energy and the Central Intelligence Agency are resources to Commerce and should be limited to the role of consultants.

3. Refine the mechanism set out in the Act for resolving interagency disputes.

A continuing problem is the inability of the various Departments within the Administration to resolve their interagency disagreements over export licensing issues in a timely manner. That failure causes confusion to exporters and their customers, and produces lengthy delays and inconsistent positions on export control matters. Although Section 10 of the Export Administration Act attempts to provide certain mechanisms to resolve interagency disagreements, those mechanisms do not work in practice for various reasons.

The Act should be amended to include a provision for an applicant's request to force the Secretary of Commerce to exercise the authorities set out in Section 10(g) within 15 days. In addition, the Secretary of Commerce should be required to act upon failure of the Department of Defense or the President to notify the Secretary of Commerce in accordance with the provisions of Section 10(g). Finally, the President should be required to notify Congress whenever he exercises his authority to overrule either the Secretary of Commerce or Secretary of Defense.

This change would place the Departments of Commerce and Defense on equal ground when resolving interagency conflicts. Such a procedure also would encourage the Administration to adopt a policy conflict resolution procedure.

4. Eliminate re-export controls on U.S. parts and components incorporated into foreign manufactured goods when U.S. parts and components comprise 25 percent or less in value of the finished good.

U.S. export regulations currently are interpreted to require entities outside the United States to obtain prior written approval before controlled commodities many be re-exported to any new destination. These controls may be interpreted to require U.S. approval of the sale of controlled products within the same country. The extraterritorial reach of these controls is a continuing contentious issue between the U.S. and its allies, and between U.S. exporters and their overseas customers. While some COCOM allies may control re-exports to proscribed destinations, the United States alone controls re-exports to other "Free World" countries or sales within the same country. As a result, many overseas manufacturers are intentionally redesigning their products to exclude U.S. origin parts and components. Numerous studies have shown that re-export controls are largely unenforceable and that foreign customers of U.S. companies are looking to non-U.S. sources of supply to eliminate the need for U.S. government approval on re-exports and to limit their exposure to possible U.S. sanctions for non-compliance. Although it is impossible to entirely eliminate re-export controls, the following changes would relieve much of the tension within the allies and focus the attention of re-export controls on commodities that are truly critical:

1) U.S. re-export controls should be eliminated on U.S.-origin parts and components which are contained or incorporated in foreign manufactured goods and which comprise less than 35 percent of the value of the finished good.

2) The controls on "in-country" resales should be eliminated for COCOM countries and for other nations that cooperatively control exports on a bilateral basis with the United States.

3) U.S. approval should not be required on re-exports between countries that control exports pursuant to multilateral or bilateral agreements.

5. Improve use of distribution license especially for certain exports to the Peoples Republic of China.

Approximately two thirds of U.S. goods requiring validated licenses are exported under the provisions of a license authorizing multiple exports, principally the distribution license. These special licenses are extremely important since they place U.S. exporters on a more even footing with their foreign competitors. Special licenses also are extremely important to the U.S. government for without them and the active assistance of the U.S. license holders and the authorized foreign consignees, compliance would suffer and the huge increase in license applications would literally overwhelm U.S. export licensing authorities.

Supplement 1 to Part 373 of the U.S. export regulations lists the categories of products excluded from multiple license coverage. It has been more than ten years since this Supplement has been subject to careful review. Over that period of time, the sensitivity of some categories has declined and others have become more readily available from non-controlled sources. As a result, U.S. firms exporting these categories of products are placed at a competitive disadvantage and the U.S. government is deprived of compliance assistance and is required to handle more individual applications than necessary.

Further, trade with the Peoples Republic of China has dramatically increased in recent years. This has significantly increased the number of export license applications in the U.S. and at COCOM. In 1986, the Peoples Republic of China agreed to cooperate with the United states to control the re-export of American products. They now issue "PRC end-use" certificates to demonstrate to U.S. officials that they intend to exercise control over a potential import.

The Secretary of Commerce should be directed to review Supplement 1 to Part 373 of the Export Administration Regulations deleting or modifying those commodity categories that are no longer appropriate. Commodity categories retained should be subject to vigorous foreign availability testing and their retention should be justified. Further, as a result of the above assurances on the part of the Peoples Republic of China and the increasing volume of U.S. exports to China, the Administration should make the PRC an eligible destination under the distribution license procedure. Negotiations should immediately begin in COCOM to establish the "green zone" as the level of technology eligible for distribution licenses and consideration should be given to extending this in the very near future to the levels applicable to countries listed in Supplement 3 to Section 379 of the Export Administration Regulations.

Mr. Chairman and members of the Subcommittee, on behalf of SAMA, thank you for allowing us an opportunity to present our views on how U.S. export controls can be refined to increased the competitiveness of U.S. companies while continuing to protect our national security. Your interest in this important issue is appreciated, and we look forward to working with you and other members of the Foreign Affairs Committee.

Senator **Sarbanes**. Thank you very much.

Mr. Cohen, let me just ask you a couple of definitional questions. When you make reference on exporting and reexporting to CoCom countries and you say "and other cooperating countries", what's the definition of other cooperating countries as you use it on page 4 of your statement?

Mr. **Cohen**. The term is referring to countries that bilaterally agree with the United States to establish an export control regime that is consistent with that established by CoCom.

We refer to such countries as a 5K country, or a cooperating, country.

The rationale is as follows: If a country decides not to become part of the larger group known as CoCom but is willing to maintain a CoCom-like system of controls, the country should be treated like a CoCom country as regards the application of U.S. export control regulations.

Senator **Sarbanes**. Now, in that same sentence—this is on page 4 of your statement—you say "A third shortcoming of the system is the extraterritorial application of U.S. controls on exports and reexports."

Now, I don't quite follow the phrase "on exports". I take it your re-export point is that when you once license an export to a CoCom country, or other cooperating country, that they should be able then to re-export without obtaining approval.

Is that correct?

Mr. **Cohen**. Yes.

Senator **Sarbanes**. Why is the phrase "on exports" in there? Do you contend there shouldn't be a license in there in the first place?

Mr. **Cohen**. Let me illustrate by example. Let us say that a computer company in the United States sells a computer to British Aerospace.

British Aerospace makes use of the computer for several years, and then it makes a decision that it needs a more advanced computer. It will purchase from the same U.S. company the more sophisticated computer and will sell the one it has been using to British Plastics. The way our system now works, British Aerospace may require the authority of the U.S. export control authorities for the sale of the computer within Britain.

In other words, our export controls are applied extra territorially to shipments within Britain from one firm to another.

Senator **Sarbanes**. So that's intended to cover a transfer within a country as well as between countries?

Mr. **Cohen**. Yes, it is what I had in mind at that point. U.S. controls on exports have produced longstanding difficulties with our trading partners, when we apply our controls in ways that our partners do not find acceptable. Disputes periodically arise with our trading partners when they feel that, in certain areas, we are far more stringent in the application of export controls than is called for in multilateral agreements.

EXPORT CONTROLS FOR SHORT SUPPLY

Senator SARBANES. On the first page of your statement, do you take the view that export controls under certain circumstances should be imposed for reasons of short supply?

Mr. COHEN. Yes, there are such situations. We, as a group, have not focused on that area, but recognize how in certain situations short supply controls may well be necessary.

Senator SARBANES. What do you have in mind?

Mr. COHEN. A specific material be necessary for production of advanced weaponry may be in short supply. If the material leaves the country, it would not be available in sufficient quantity for production of the weaponry. We recognize the benefit of trying to control such a material or other resource in the United States which is in short supply.

Senator SARBANES. There's some perception that the thing that most puts us in question as a reliable supplier is of course the short supply argument.

It seems to me other countries can understand the national security or foreign policy argument. You're arguing that we cast a net too broadly. Generally speaking, they recognize that, at least within a certain limited range, the short supply argument is usually a straight economic argument.

And then they contend, well, what are the purposes of these contracts if you're simply not going to honor them, even in the question of short supply? Which is usually for economic reasons.

Nevertheless, would you, for the record, tell us a bit about the Emergency Committee for American Trade?

Mr. COHEN. Certainly. It was founded in the late 1960's by a small number of chief executive officers who felt that their views on trade——

Senator SARBANES. It's been an emergency for quite a while. [Laughter.]

Mr. COHEN. Now, Senator, it has a pension fund. [Laughter.]

Who felt that their views on trade issues were not being expressed adequately in Washington. They had been consulted by President Johnson, who believed that it would be extremely helpful if they would share their views and, most importantly, come to Washington to fight against quota bills and other protectionist legislation then pending in the Congress.

The CEO's involved at the start constituted a very small group. They spoke out and decided after they had had a taste of lobbying in Washington that it would be of value to remain an active lobbying group.

ECAT began as a handful of chief executive officers and has now become approximately 60 CEO's of major U.S. firms.

Senator SARBANES. My time is up, but let me just put one question to Mr. Pomeroy.

You argue that by placing higher fences around fewer items, the United States can better protect our security while eliminating impediments to trade of other items.

Mr. POMEROY. Yes, sir.

Senator SARBANES. I see how we can eliminate the impediment. How do you demonstrate or document the fact that the current system is not inhibiting the trade in these fewer items?

Mr. POMEROY. How the current system is not inhibiting the trade? Well, I think any kind of control does inhibit some trade. There's a national security issue here that we have to pay attention to and there are some very critical technologies.

There are some products that we do have a monopoly, this country does have a monopoly on the technology that are critical to national defense.

And it is going to inhibit the trade to a certain extent. But, that list of items is very small. And I would contend that the areas where this country has a monopoly on technology today is a very small list of items, and there is going to be some inhibition of trade in those items. But, far and away, the bulk of the dollars, the bulk of the things that we make in this country, we don't have a monopoly on.

Senator SARBANES. I understand that, but you're using two arguments. I understand one of them. I don't follow the other.

You argue that the inhibitions were too extensive, and that they're inhibiting trade in certain items in which trade ought to take place; therefore, the list should be——

Mr. POMEROY. Short. That's correct.

Senator SARBANES. I understand that, if you do that, you will encourage trade in the items no longer on the list.

You also make the argument though, as I understand it, that by doing that, you will be better able to protect the remaining items on the list.

My question is what reason do you have to think that those items aren't protected in any event with a long list?

Mr. POMEROY. The argument and the thought here is that we have quite a number of people in the Government who are working on the export control problem—in the Commerce Department, the Defense Department, and so on.

Those people are free to look at a small number of cases, a small number of items. We will do a better job and they will do a better job in controlling those items.

Senator SARBANES. Can you show that they have not been able to protect those items as it is?

Mr. POMEROY. No, I can't.

Senator SARBANES. Senator Heinz.

Senator HEINZ. Thank you, Mr. Chairman. I'm tempted to ask Mr. Pomeroy, who says that today's KGB list is shorter than the export control list, if he has a copy of the KGB shopping list handy. [Laughter.]

Mr. POMEROY. Sorry, Senator. I didn't bring it with me.

Senator HEINZ. If not, why not? And if so, how so?

Well, gentlemen, let me ask you this. You've mentioned a variety of bills. I suppose the Heinz-Dixon bill was one of the first introduced. You've said some kind things about many of the provisions, but do you endorse it? Do you endorse it with some improvements or deletions?

Do you want to take a crack at that, Mr. Pomeroy?

Mr. Pomeroy. Mr. Senator, I'm not familiar in great detail with the provisions in that specific bill. We've listed in our testimony——

Senator Heinz. Fair enough.

Mr. Cohen?

ENDORSEMENT OF S. 547

Mr. Cohen. We do endorse S. 547, reserving of course the right to object at a later point to some specific provisions, Senator.

More seriously, we are most impressed with the key provisions in S. 547. In the area of national security export controls, the specific provision in S. 547 on foreign availability is of the greatest importance.

Over the past decade, this committee has labored to make the foreign availability provision work. Each time the EAA is reauthorized, there's a new attempt to try to find a way to deal with the problems which prevent it from working.

What you have done, I believe, by proposing that there be a separate definition of West-West foreign availability gets to the nub of the foreign availability issue.

In many cases, products which are generally available in the West are not now exportable from the United States because it is maintained that worldwide foreign availability does not exist. In S. 547, you're differentiating the concept of general foreign availability appropriated from that of foreign unavailability in the West. It is in Western terms when the question is exports to the West.

If the Administration would implement your West-West foreign availability provision, it would serve to promote U.S. exports and thereby increase the competitiveness of U.S. companies.

We are very strongly supportive too of the provisions in foreign policy in your bill which you jointly developed with Senator Dixon. In discussions of S. 547, your language on foreign policy is often overlooked. Yet it is the foreign policy issue which is frequently the most difficult aspect of any debate on what's to be done on export controls.

ECAT companies are impressed that your bill attempts to conform the imposition of foreign policy export controls under IEEPA to their imposition under the Export Administration Act. Another way of saying that is the Congress labored long and hard in deciding on what the appropriate procedures and criteria should be for imposition of foreign policy export controls under the EAA; however the administration in a number of recent cases over the past two years has imposed foreign policy export controls using authorities other than the Export Administration Act. We in business do not challenge the administration by saying that a specific foreign policy control which has been imposed under other authorities, for example, those of the International Emergency Economic Powers Act, should not have been imposed. We think, however, that the imposition of a foreign policy export control under other authorities may cause trouble, given that the Congress has spoken, in the EAA on what should be the criteria and procedures for imposition.

One last point dealing with this issue. In the various reforms of this committee on foreign policy export controls, an emphasis has been to encourage multilateralism. If such controls continue to be imposed by the Administration under the International Emergency Economic Powers Act, what we read as the intent of Congress in encouraging multilateralism will not be realized. This we feel, would be unfortunate.

I'll stop at that point. There are certainly other high points in S. 547.

Senator HEINZ. Mr. Hough, do you have a particular position on S. 547?

Mr. HOUGH. SAMA supports S. 547. I think Mr. Cohen has articulated it very well.

Senator HEINZ. In that bill there are a number of differences between it and the administration bill. There are a few differences between it and Senator Cranston's bill. I just got started.

That's the fastest 10 minutes in history. I started at 22 after and I've got a red light already.

Senator SARBANES. You may continue.

Senator HEINZ. Thank you.

What are the other major provisions you would like to see us retain in our bill? Let's assume you could name your provision for the sake of argument. All provisions in all bills are always challenged by somebody.

What are the next most important provisions in our bill in anybody's judgment after the foreign availability issue and the separate definition of same for that, and for conforming IEEPA to section 6?

What other provisions?

Mr. POMEROY. From the American Electronic Association's point of view, the elimination of controls on exports of low level technology to Free world countries; getting the list cut down is essentially what we're talking about. Getting rid of the low level stuff.

Senator HEINZ. What about the 35 percent parts and components level versus 20 percent?

Mr. COHEN. The parts and components provision, you're referring to? That would be extremely important. It would be at the very top of our ECAT list.

Mr. HOUGH. That's very important to us, too.

Senator HEINZ. Some people say, well, why should we get into that? That can be handled by regulation. Why should we get into it if it can be handled by regulation?

Mr. POMEROY. Because if you don't act, it probably won't be handled. That's the basic issue. That's why we're sitting here today.

DECONTROL LEVEL

Senator HEINZ. Let's talk about the decontrol level. When the administration was here last week, at least part of the administration was here last week, I asked whether or not we should go to the PRC green line or to the AEN level.

The administration took the fifth—[Laughter.]—when asked the question why would we want to establish a higher level of decontrol. Why would we want to decontrol more to Communist China, the People's Republic of China, than to Norway or Canada or Brazil or Taiwan?

What's the answer? To what level should we mandate decontrol for West-West sales?

Mr. COHEN. We have recommended, Senator Heinz, utilizing the AEN level. We felt that would be an appropriate level of decontrol in order to remove some of the licensing burden on U.S. exporters.

Your specific proposal in S. 547 is very inventive and provides for using the PRC green line as of a March 1, 1987. We in ECAT are now looking at that proposal which would allow a higher level of shipment under general license.

Senator HEINZ. Are there any weaknesses with that proposal that you know of?

Mr. COHEN. None that are immediately evident. It would allow for additional exports under general license to the members of CoCom than would be allowed under the AEN level. Both proposals are trying to achieve the same objective of reducing the licensing burden on shipments to the Free world, not just CoCom.

Mr. POMEROY. The American Electronics Association position on that is to extend, get rid of the AEN level items to all free world countries, and the PRC green line to CoCom in the 5K countries, these other countries that are agreeing on bilateral controls.

Senator HEINZ. Let's go back to the 35 percent component threshold value for components. Is there any risk? And can you provide support for the position that no critical technologies will slip through to the Soviets through that threshold?

I assume, if Mr. Perle were here, he would find some way to persuasively argue that there's some enormous risk in that. How would one rebutt that argument? Can it be rebutted?

Mr. HOUGH. I think, Senator, it comes down to a logical consideration of how many times the value of a product would someone pay just to get a small part of that product.

Senator HEINZ. You're saying, if it's really 35 percent, they'd have to pay 300 percent, that it's just not worth it and they could get it some place else?

Mr. HOUGH. Right. You can debate whether that should be 3 times, 5 times, 10 times. Somewhere in there, you know, there's an appropriate line.

Mr. POMEROY. The AEA has taken the position that 20 percent is good enough for most of our companies are major equipment suppliers.

Senator HEINZ. A last question.

Mr. COHEN. May I just add one point on the parts and components, provision, Senator? We would strongly urge that a single deminimis level be met—that there not be different deminimis levels for different parts of the world.

We understand there is some consideration within the administration of setting one de minimis level for CoCom, and a separate de minimis level for the rest of the world.

We think that would be disadvantageous because in the trade world the lowest or lower de minimis level would become the Commercial Benchmark. Companies would not be in a position to arrange, for example, for 20 percent U.S. parts and components on certain shipments and, ship 35 percent U.S. parts and components on certain other shipments of basically the same product.

Senator **Sarbanes** When you use the word "world" there, you're encompassing the East bloc countries?

Mr. **Cohen**. Our specific ECAT recommendations deal with the Western world.

Senator **Sarbanes**. In the statement you just made, the differentiation when you said you did not want a different standard worldwide, is the East bloc encompassed within worldwide?

Mr. **Cohen**. In our specific recommendations, we are only talking about the West. I was not including the East bloc.

Senator **Heinz**. So your distinction is between CoCom and other Western countries?

Mr. **Cohen**. That is correct.

Senator **Heinz**. And CoCom and cooperating countries may be other Western companies.

Mr. Chairman, one last question. You've been very kind.

About the most significant difference I can determine between Senator Cranston's bill and Senator Dixon's and my bill is that Senator Cranston treads where angels recently feared to tread—on the threshold of 10G.

We don't touch that, tread on that, in our bill.

VIEWS ON SENATOR CRANSTON'S BILL

Senator Cranston's provision puts some time limits on DOD review. First, there's 10 days. Then there's another 10 days for the President to decide. And then there's kind of a drop dead provision, although I don't have the text of it in front of me.

What are your views on that? Senator Cranston's provision? Substantively, or, for that matter, tactically, whether you support it or not, should it be in our legislation?

It's something you all I guess would like but how important is it?

Mr. **Cohen**. Our own group debated long and hard to develop specific recommendations for reform of the Act. We, for basic reasons, decided to focus on appropriate export control policy, rather than to focus on what we saw as executive-level implementation of the law and implemented regulations.

We felt, in terms of our time, we could be most effective in making recommendations on necessary changes in current law and regulation.

We believe that it would be better at this juncture to focus on the policy issues than on the organizational ones.

Senator **Heinz**. Mr. Pomeroy?

Mr. **Pomeroy**. I think we'd agree with that.

Mr. **Hough**. Yes, Senator. We had the same debate with SAMA and came up with the same conclusions.

Senator **Heinz**. Gentlemen, thank you. You've been extremely helpful.

Mr. Chairman, I thank Senator Graham for permitting me to complete my question. I have to go to the Finance Committee and I probably won't be able to get back for a while.

Thank you.

Senator **Sarbanes**. Senator Graham.

Senator **Graham**. Mr. Chairman, last week, at our hearing on this subject, there were some comments from the administration. It was unclear to me as to whether the problems that were being identified were problems in the law or problems in the judgment being executed in implementing the law.

Mr. Cohen, using the four-part diagnosis that you have given us today, which of those four are susceptible to remedy within the existing law?

And where are changes in law necessary in order to accomplish the purposes that you think would be desirable?

Mr. COHEN. In the first one, where we are addressing the question, Senator, of the unrealistic assumptions regarding the ability of the United States to control the diffusion of advanced product in the West, I believe we're very much in need of some legislative action.

In particular, as Mr. Pomeroy and others have indicated, we need to decontrol low technology items.

Now, we can have various decontrol standards, as Senator Heinz was getting at a little earlier in the hearing; however, there is general agreement that controls should not cover commonly available products in the West. Here there is need for legislative change.

Senator GRAHAM. Could I consider what is the standard in current law? And how do we need to change that standard in order to move the line between levels of technology?

Mr. COHEN. We would make use of what is known as the AEN level. Under current law, U.S. companies may ship to CoCom countries under general license items below the AEN level.

We would apply the AEN standard to the free world, not just CoCom countries.

Mr. POMEROY. The best I know, there isn't a standard under present law.

Senator GRAHAM. So, the administration, if it chose, by its method of execution, could, I assume, adopt the standard you have suggested?

Mr. POMEROY. That's correct, but they have not. I think that's the important point.

Senator GRAHAM. I guess my concern is the degree to understand what game we're playing. Are we playing a game of setting policy because we disagree with what previous congressional action has been, or feel that the environment has changed and, therefore, requires revised congressional action?

Or are we saying that our essential disagreement is with the administration and the manner of its execution of existing law?

If we could go to the second point in your diagnosis. To what degree is congressional action required to accomplish that?

Mr. COHEN. I would say, in the second area—the problem that many of the controls are on items that are generally available in the West—we need legislative action. We need a concept of West-West foreign availability that does not now exist in statute.

The approach that we are proposing would shift the burden of proof on availability. Currently, a company wishing to export a controlled item may make its case to the administration that the item is generally available.

The administration then makes its own finding as to availability. We'd like to change this procedure for shipments to the West. At a specific level of technology for a product category, the administration would establish generally availability in the West. The presumption would be that all products below that level of technology could be shipped without an individual validated license, unless the government proved for such products that foreign availability does not exist.

Senator GRAHAM. Under the current law, foreign availability is not an allowable consideration by the executive in administering the law?

Mr. COHEN. It is, but it has not been well-implemented.

Mr. POMEROY. Or implemented at all.

EXTRATERRITORIAL APPLICATION

Senator GRAHAM. Your third shortcoming was the extraterritorial application. What does the current law provide relative to that?

Mr. COHEN. The current law does provide for extraterritorial application. We have suggested various ways that it can be curbed. In a number of areas, changes could be made administratively. It would not absolutely require legislation.

Senator GRAHAM. The example that you used of British Aeronautics and British Plastics could be accomplished administratively?

Mr. COHEN. We believe so, yes.

Senator GRAHAM. The fourth shortcoming is that it does not discriminate adequately between advanced and low technology items.

Mr. COHEN. We believe that the executive does require some direction from the Congress on this particular point. That is why we have been discussing with you and your colleagues this morning the appropriate standard for licensing.

Senator GRAHAM. Mr. Hough, the comments that you made, making reference to the piece of equipment you've brought today, to what degree would the imposition of export controls because of the enhancement of a minor dollarwise part of this equipment, would it require congressional action in order to achieve your results?

Mr. HOUGH. What was implemented in 1985 was intended to decontrol these types of instruments. However, what happened was the subsequent regulations and definitions that were imposed in the difference of opinion and the interpretation of this definition within the Government still continues to control a number of goods which we believe are nonstrategic and shouldn't be controlled.

One of the problems that you get into in this type of issue goes beyond simply the control of the first product. You can get into a situation where one printed circuit board within an instrument needs to be repaired because it's especially designed for controlled instruments.

Then that board comes under the control and you get into all sorts of difficulties with that.

So what we are suggesting in the language in our written statement would really clarify more fully, we think, that if a good is nonstrategic and utilizes a small percentage of controlled components, then it should still be considered nonstrategic.

Senator GRAHAM. I guess my basic concern as to the role of the Congress and the administration on what is, by everyone's agreement, a complex and in many instances highly subjective area, and

I am trying as a new person to these issues to get some sense of really what we are talking about, changes in fundamental national policies related to this or whether we are simply saying the policy is satisfactory; we disagree with the specific decision that you made in carrying out that policy.

If that is the arena in which we are operating, I think it takes a different set of surgical procedures to arrive at the results.

Senator SARBANES. I think Senator Graham is making a very important point.

Let me ask you, if you were administering the current export control law, what percent of the problems do you think you could eliminate if you had a free hand to administer it—the current policy statement contained in the statute with its various provisions?

I take it from the responses that in fact you could get most or certainly a significant part of what you perceive as the current problem, is that correct?

Mr. COHEN. I would say, Senator, that is correct, that a large percentage of the problems could be handled administratively. That is not to suggest that legislative steps are not among the most crucial steps that need to be taken. Many of the specific proposals that ECAT has made would require legislative action.

Mr. POMEROY. The fact of the matter is we don't have a free hand. We don't know anybody that does have a free hand to do this. That is part of the problem. That is part of why we are here.

Senator SARBANES. Well, the law, the current law, generally speaking allows the result you would like to see, but it did not happen.

Mr. POMEROY. It would allow a large percentage of the results that we would like to see. There are some additional things that do need legislation, but it would allow a large percentage of it.

Mr. COHEN. In a sense, what we are talking about, as has just been suggested, is fine-tuning current law. In many cases that fine-tuning needs to be legislative because the intent of the 1985 reauthorization is not now being realized—as in the case of microprocessors, which Mr. Hough was speaking about, and in the case of foreign availability.

The intent is very clear. It is not being realized.

We believe very strongly that with legislative fine-tuning the basic intent of Congress would be better realized.

CONTROLLED COMPONENT

Senator SARBANES. Let me ask you this question on the problem of a nonstrategic good that incorporates within it a controlled component, and the approach that has been suggested is that the controlled component is 20 percent or 35 percent of value—that is the standard—and that there would be no restraint. But that doesn't really focus on the controlled component and its importance.

I am puzzled about that rationale. In other words, it seems to me that you have a good in which the controlled component was 32 percent of its value, and yet one could look at it and say, well, that is a very important controlled component, and we don't really want that moving without passing through this process.

What is your answer to that?

Mr. HOUGH. Senator, in our proposal there are three criteria that would act as filters to address that problem.

First, the controlled component has to be essential to the product. The product would simply not function without that controlled component.

Senator SARBANES. Now, you are expanding it beyond the microprocessors, I take it, that is in the current law?

Mr. HOUGH. Yes.

So it would have to be essential to the functioning of the good. It would have to be customarily sold with the good in West-West trade and then it would have to be of a percentage which we have suggested as not more than 35 percent.

The rationale is again that for someone to obtain that component they would have to pay three times or more the value of the component and then have an instrument or a product that simply isn't functioning if they use that component for other purposes.

So that is the rationale in which we tried to get to the issue of buying our product simply to get a subcomponent.

I can provide a current example we have right now. We have one of these programmers in a sausage factory. It happens to be in the Soviet Union. One of the memory boards needed to be repaired, and it requires a validated license because it contains memory components. We have been waiting 4 months to get a license just to repair the customer's memory board.

In the meantime, we have sent them on consignment a whole new unit. So we really haven't accomplished anything, but a significant amount of cost on our part, strictly because that board is controlled with a few memory components on it.

Senator SARBANES. If you had a decision within 1 week or 2 weeks, would that have essentially addressed your problem?

Mr. HOUGH. Well, in that specific instance we probably could have taken care of that problem, yes, within 1 week or so.

Mr. POMEROY. But if those decisions are inconsistent, if we get a "yes" one time and a "no" another, we have ruined our relationship with our customer, and that doesn't work either. We have to have some predictability to know what we are going to be able to do. Getting decisions quickly is definitely good. We want quick decisions.

Mr. COHEN. If I could emphasize what Mr. Pomeroy is saying, that is the basic problem in many ways with the export control system. Business finds responses from the administration inconsistent from case to case. A business may be able to export in one situation, only to find that it will not be able to export in a very similar situation. What one company may export, sometimes another company may not.

What Mr. Pomeroy is suggesting is we need quick turnaround time and consistency; hence, we are here today to suggest legislatively and administratively that there would be ways to improve the system.

EXPORTING TO THE EASTERN BLOC

Senator **Sarbanes**. Do any of you agree with the observation that has been made to us that unless the United States is the stiffest on this question of exporting to the Eastern bloc that the starch will go out of the system; in other words, that all the other countries that are part of the process, if left to their own preferences, would obviously be much more lenient in how far that would go—it is hard to tell—but the one that in effect transmits some stiffness to the whole process is the United States?

Mr. **Pomeroy**. First of all, 99 percent of our sales of all Association members are to Western countries, not the East. The real issue in a lot of cases is West-West trade.

I can't answer for the Association. I can answer for myself.

The fact of the matter is that most of the products we are dealing with are now available elsewhere in the world. There are very, very few technologies that the United States has a monopoly on today, and whether the United States is the most rigid, the most stiff supporter of this or not is really going to have a small degree of effect on control of getting sole use technologies to the Eastern bloc if the other countries don't do it, also.

So we have to bring the Western countries—that is why multilateral controls are important—we have to get everybody in the West to agree to do similar things in a similar manner.

I don't know whether I agree with that specifically.

Mr. **Hough**. Senator, I don't think any of us would consider anything that we are proposing is going to take the starch out of the system.

I think all of us are concerned about national security, and I heard from our subsidiary offices overseas that they have been tightening up considerably in the last years. In some instances they are having difficulties in getting export licenses from the Italian or Dutch governments, more problems than they are getting from us now.

So I don't think the proposal is intended to do that.

Mr. **Cohen**. I would second what has just been said. The specific proposals we are making depend upon a continued commitment by allied countries as well as cooperating or friendly nonallied countries. What we are suggesting here in my view would in no way take, as some are suggesting, the starch out of the system. If anything, our proposals would allow us to cooperate more effectively in general areas with allied and cooperating countries where there is common agreement, and there are many such areas.

What frustrates the cooperative effort, in our view, is what is increasingly seen as the unilateral effort of the United States to control, for example, low level technology. It spoils the relationship with our trading partners who say that they want to work with us but that we are stymieing trade in ways that do not make much sense. And we tend to agree with that argumentation.

Senator **Sarbanes**. Gentlemen, thank you very much. It has been a helpful panel.

If our second panel will come forward now, Mr. Brady and Mr. Mendelowitz, we would be happy to hear from you.

Mr. Mendelowitz, why don't you lead off?

STATEMENT OF ALLAN I. MENDELOWITZ, SENIOR ASSOCIATE DIRECTOR, GAO

Mr. MENDELOWITZ. Thank you, Mr. Chairman.

I have a short statement, and with your permission I will read a somewhat abbreviated version and submit my full statement for the record.

Under the Export Administration Act of 1979, as amended, the U.S. Government controls exports of commercial goods and technology that could also be used for military and nuclear purposes.

Controls over the export of militarily critical items are an important contribution to U.S. national security. Under the act, the Secretary of Commerce administers the control system and issues export licenses, but certain kinds of export licenses are reviewed by such other agencies as the Departments of Defense and State. Export licenses are also required for many subsequent reexports of controlled products.

The U.S. controls exports to proscribed destinations, primarily the Soviet bloc, in cooperation with our NATO allies and Japan.

The informal multilateral organization through which these control efforts are coordinated is called CoCom. This multilateral effort is essential to effective control because most of what we try to control is available from other CoCom members.

United States export licensing requirements are stricter than those of other countries and increasingly less effective because of the growing availability of comparable products from developed countries and from newly industrializing countries, such as South Korea and Brazil, who are outside the CoCom system. Exporters are particularly concerned with the large volume of exports that require licenses; the complexity of the regulations and the time required to obtain export licenses; licensing requirements for re-export of U.S. goods, including parts and components; and foreign availability of goods and technologies subject to U.S. export controls.

They fear that sales may be lost and the incentive for U.S. companies to develop new products and technology lessened. A recent National Academy of Sciences report found that, while controls do hamper Soviet acquisition of sensitive goods, they also have an increasingly corrosive effect on U.S. relations with other countries and make it harder for U.S. businesses to compete in the international arena.

In addition to the concerns over national security controls, the use of export controls for foreign policy purposes is viewed by U.S. exporters as causing concern about the reliability of the United States as a trading partner. Such controls adversely affect U.S. firms' investment in the targeted countries.

In several reviews of various aspects of the export control program, we have concluded:

The list of controlled items and the number of required licenses is too large. Almost half the export license applications received each year could be eliminated without affecting national security. There is also potential for further reducing license requirements for exports to countries who cooperate with the United States in controlling exports to the Soviet bloc.

In 1985, when the Defense Department began its review of selected free world license applications, the Commerce Department approved licenses in about two-thirds of the cases for which Defense recommended denial. Defense generally based its denial recommendations on general concerns and did not have specific adverse information with respect to individual license applications to support its denial recommendations. Basically, Defense and Commerce differed with respect to policy issues.

Controls imposed for foreign policy purposes are largely symbolic, despite changes in the Export Administration Act in 1985. Under these circumstances, when controls are imposed for symbolic reasons, even the availability of comparable products from other countries does not limit the imposition and maintenance of foreign policy controls. Consequently, the costs of symbolic controls are borne by American businesses in the form of export sales lost to firms in other countries that continue to export to the country that is the target of the controls.

Currently, our work on export controls covers such matters as export and import provisions of the Libyan Sanctions Program; the Defense Department's implementation of and current issues relating to the militarily critical technologies approach; review of the current foreign policy controls; and implementation of the 1985 foreign availability statutory provisions relating to export controls.

In recent testimony before the House Foreign Affairs Committee we reported the following preliminary findings with respect to foreign availability:

The 1985 amendments were driven by congressional interest in reducing the number of products and related technologies subject to export controls. This has not occurred.

It has taken Commerce considerably longer than it originally envisioned to complete foreign availability assessments due to difficulties in reaching agreement with Defense and developing the information to assess foreign availability.

There are apparently various policy and coordination problems between Commerce and Defense involving the sharing of information, the evidence required to support a determination of foreign availability, and the lack of an expeditious approach to resolving differences over what the evidence means.

There have been very few requests for foreign availability determinations from U.S. firms and technical advisory committees.

And U.S. multilateral control commitments need to be considered and factored in to any changes in the foreign availability process.

Mr. Chairman, this concludes my brief statement. I will be happy to try and answer any questions you may have.

[The complete statement of Allan I. Mendelowitz follows:]

Senator **Sarbanes**. Thank you very much.
Mr. Brady.

STATEMENT OF LAWRENCE BRADY, SANDERS ASSOCIATES, FORMER ASSISTANT SECRETARY OF COMMERCE FOR EXPORT ADMINISTRATION

Mr. **Brady**. Mr. Chairman, I appreciate the ability to air my views in an area that has occupied about 10 years of my professional life.

I should note that my testimony does not necessarily reflect the views of my company. They are my observations, based on 5 years as Deputy Director and Acting Director of the Commerce Department's Office of Export Administration, and subsequently, as Assistant Secretary in charge of this area for the first 3 years of the Reagan administration.

Needless to say, my experience since leaving Commerce is a factor in shaping these observations. I have been involved in international business development and international marketing for the last 3 years. I know firsthand the impediments U.S. industry faces overseas.

My objective today is not necessarily to deal on a micro level with all the suggestions that have been made to you to improve the export administration process, but rather to make some macrooriented observations on what I believe are fundamental problems.

I would first like to draw attention to what I believe should be fundamental distinctions that put this entire discussion in perspective. Three general areas continue to be confused and intermingled and I believe deter from our ability to identify proper and adequate solutions.

I think it is imperative that we distinguish for export control purposes East-West trade, West-West trade, and controls for foreign policy and national security reasons as applied to both East-West and West-West trade.

EAST-WEST EXPORT CONTROL

Mr. Chairman, let me first address the East-West export control area. We need to keep in mind that the export control debate sometimes veers off in the wrong direction.

The real issue in the East-West context is not the competitiveness question, namely whether we have handicapped U.S. producers vis-a-vis foreign competition.

Based on the testimony I've seen and the comments in the press, the thrust of proposed improvements are being advocated in terms of increasing America's competitiveness.

While I agree that by streamlining the export control system, particularly with regard to West-West trade, we will improve American industry's ability to compete—and if I may intervene for a second, I think the debate on competitiveness, Mr. Chairman, should draw a distinction between national competitiveness on the one hand and a particular industry or industry sector's competitiveness on the other; because the solutions to the two are radically different.

I think structuring the debate in the competitiveness context which is being done does a disservice to the National Security Export Control System and diverts our attention from the root causes of our national competitiveness problems.

We should not deceive ourselves into thinking that we're really going to substantially improve America's competitive posture by changing the export control process to permit more exports to the USSR and Eastern Europe.

The key issue in examining the East-West export control system is to assess whether the system is functioning properly as a part of the overall strategy for dealing with the Soviet challenge.

The function of the export control system is to ensure that our lead time in technology—which provides us with qualitative superiority on the battlefield—is adequate to offset the Warsaw Pact's quantitative superiority.

In the early 1970's, I served in the State Department and the Council on International Economic Policy at the White House, when the United States first took a look at relaxing export controls. At the time it was felt that a modest increase in the transfer of advanced technology would pose few substantial risks to U.S. security.

It was believed the Soviets were interested in building up the civilian sector of their economy and would not jeopardize their access to Western products by diverting technology to the military or acquiring it illegally.

Most important, we assumed that we could offset the erosion of NATO capabilities implied in West-East technology transfers by stepping up our own defense efforts.

The experience of 1970's of expanded East-West trade in high technology goods calls these assumptions into question.

The Soviets did not place a priority on civilian industries. Quite the contrary, they increased the flow of resources to the defense sector during the 1970's and into the 1980's. They diverted a substantial share of import technology to military production, and perfected an elaborate, governmentwide apparatus specializing in illegal acquisitions.

SOVIET SUPERIORITY

An overwhelming Soviet superiority in conventional forces in Europe has been the unfortunate result of these developments.

I want to dwell on this point for a moment because of the changed security environment we might find ourselves in as a result of a possible agreement in Europe on the elimination of intermediate range missiles.

Only now that such an agreement is within sight is serious attention being given to the new requirements that will be imposed on NATO countries to improve their conventional military capabilities.

I believe one of those requirements ought to be a renewed commitment to a strengthened export control system. It would be a grave mistake, in my view, to deemphasize the nuclear deterrent in the European theater if the conventional deterrent is inadequate to defend NATO countries against potential aggressors.

To rebuild that conventional deterrent, we must spend more and we must take every step to protect our technological lead time.

To do otherwise is to invite attack and to lower the threshold for conflict in Europe, which none of us wants.

Having said this, it doesn't mean that the export control list should be looked upon as a static one. It is dynamic because the technology it seeks to control is in dynamic change.

Thus, the control list should be reviewed continuously to streamline and strengthen the list. I believe that the Defense Science Board task force recommendations of 10 years ago still contain the relevant guidelines to accomplish this task.

Even though a lot has changed in that 10-year period and the control system has been improved, I do not doubt that it can be improved further.

The most important finding of the Board was that we should control revolutionary rather than evolutionary technology, and that we should move the Government's resources away from an intensive focus on product reviews and look at evaluating technology transfers themselves.

Ten years later, the export control system has not made allowances for distinguishing between evolutionary and revolutionary transfers.

The single biggest problem we have is that our technology list is still weighted toward products. We try to control all exports containing useful technology.

The single most important criteria should be the degree to which a potential sale advances the capabilities of our adversaries.

The new situation in Europe may make the task that much more critical. Last week's cover story in U.S. News and World Report on smart weapons draws attention to the role that they will play in future military encounters.

Anyone reading that article must come to the conclusion that our export control system must play a more critical role than ever in assuring that the USSR does not get the critical technology essential for improving their high technology defense capability in areas like electronic warfare, electronic counter-measures, low altitude radars, forward looking infrared radar (FLIR) laser bombs, et cetera.

As we review the East-West CoCom list where possible decontrol of items, then, we should focus on the specific military capabilities we are transferring with each sale.

The question ought to be—how many sales on a particular technology over time will have a degrading effect on our qualitative superiority in conventional forces, and what will be the resulting impact on our defense budget to compensate for that degrading?

Unless our military advisers are comfortable with the answers, I believe we should be cautious in our approach to decontrol and place greater effort in obtaining multilateral cooperation in CoCom and elsewhere to remove the foreign availability.

I mentioned a moment ago that I thought the Defense Science Board task force recommendations of 10 years ago were still valid. They have not been fully implemented by a long shot.

Mr. Chairman, I believe it would be appropriate for the Congress to ask the Secretary of Defense to reconvene the Board for the specific purpose of reviewing the developments of the last 10 years in the context of the original recommendations of the Board and submit a report to the Secretary of Defense and to the Congress.

The National Academy of Sciences has its views, as does the GAO and many private sector organizations. I think it's appropriate that the group that began this entire debate look at the issue again and perhaps give us additional guidance.

WEST-WEST EXPORT CONTROLS

Now, I'd like to turn for the moment to the West-West export control area. The basic reasons we have controls on West-West trade is to preclude diversion from re-exports and from illegal exports from third countries to the U.S.S.R. and Eastern Europe.

As the Soviet effort to gain Western technology illegally was discerned, we have reacted by extending controls on exports to non-Communist countries and even to the CoCom countries themselves, which are supposed to subscribe to the same control system as we do.

Mr. Chairman, to the extent there is a competitiveness element to the export control debate, it is in the West-West trade arena. The West-West control area is one on which I had fundamental disagreements with the Department of Defense because it is in this area that controls can strike at the core of our industry's ability to compete.

As you've heard this morning, I believe we've been going down the wrong path in effectuating a policy to prevent diversion to controlled destinations. We must not close our borders but rather control the borders of the group of countries with which we maintain the control system—the CoCom countries and other countries with which our trade and market is an important factor.

I'm not suggesting that we eliminate Free world export controls. Quite the contrary. I think that all regulatory and legislative changes should have a security and economic impact assessment of the changes.

But I also believe that if the Congress and the executive believe we should move to reduce intra-CoCom and free world controls, then it is encumbent upon us to make certain that the enforcement mechanism is adequate to prevent diversion to the Soviet Union.

I believe the time has come for the United States to make a link between violation of the CoCom rules to violation of international trade rules generally.

I believe we should amend section 301 of the Trade Act to provide for petitions by private individuals, companies or government bodies, to be filed with the Special Trade Representatives if an aggrieved party has reason to believe that one of our competitors in a foreign country is violating the CoCom agreement and exporting to a controlled destination without the required CoCom approval.

In my experience, the American manufacturer is the best watchdog and policeman for the CoCom system. He knows, because of his dealing overseas and competitive climate he functions in, when an export has taken place, to where, et cetera.

What better way to assure the sanctity of the CoCom agreement than to give it some enforcement teeth?

With regard to the less-developed countries and particularly the NICS, should we not ask them to choose what market they're most concerned about?

If they do not want to abide by the CoCom controls with respect to the CoCom controlled products, then I propose that any special trade privileges, such as GSP, be canceled for those countries.

What I'm suggesting is that we make our trading partners choose which market they want most. If they cannot abide by the CoCom controls which are critical to our national security interests, then penalties should be imposed on those companies' exports to the United States, which is what section 301 provides.

Further, I believe it is appropriate for the Congress to direct the administration to undertake an intensive negotiating effort with our allies and other appropriate countries to develop and coordinate an enforcement mechanism to preclude diversion to controlled countries, and report back to the Congress within the time certain on the results of those efforts.

Any benefits that may accrue to CoCom and free world countries by legislative and regulatory changes should be contingent upon their coordinating and implementing an enforcement mechanism as equally effective as the enforcement regime in the United States.

FOREIGN POLICY CONTROLS

I would like now to address a third area I mentioned, namely foreign policy controls as they apply to both East-West and West-West trade.

I think we have to distinguish between national security and foreign policy controls, and that distinction must not be blurred. One of the most fundamental concerns in the business community is to know where it stands vis-a-vis the trade regulatory apparatus; and the foreign policy area is a major source of confusion.

For example, the sale of computers to Iran has occupied front page news in many newspapers. Yet, in reading those stories, which, quote, "a number of government officials"—and I've spent 10 years in this area—I am left not knowing whether these items are controlled to Iran for foreign policy or national security reasons.

I am struck that these computers apparently can go to the KGB in Moscow, cannot go to South Africa, but can go to Iran.

Is not the human rights situation as bad in Iran as it is in South Africa?

Mr. Chairman, what is the basis for this absolutely conflicting and irrational policy other than the policy biases of three separate agencies involved in the process, and probably the Congress itself?

Take another case, which I believe is one of the major foreign policy successes of this administration—the pipeline sanctions. At least partly as a result of these controls, the second strand of the Siberian pipeline is not going to be built.

The Norwegian offshore gas reserves are going to be exploited and West European dependency on Soviet gas will be limited. These were all the primary objectives of those sanctions, as well as aiming for reconciliation between the church, government and soli-

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United States General Accounting Office

Testimony

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EXPORT CONTROL OF COMMERCIAL GOODS AND TECHNOLOGY

STATEMENT OF
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BEFORE THE
SUBCOMMITTEE ON INTERNATIONAL
FINANCE & MONETARY POLICY
SENATE COMMITTEE ON BANKING,
HOUSING AND URBAN AFFAIRS

Mr. Chairman and Members of the Subcommittee

Under the Export Administration Act of 1979, as amended, the U.S. government controls exports of commercial goods and technology that could also be used for military or nuclear purposes. Controls over the export of militarily critical items are an important contribution to U.S. national security. Under the Act, the Secretary of Commerce administers the control system and issues export licenses, but certain kinds of export control licenses are reviewed by such other agencies as the Departments of Defense and State. Export licenses are also required for many subsequent reexports of controlled products to third countries.

The United States controls exports to proscribed destinations, primarily the Soviet Bloc, in cooperation with our NATO allies and Japan. The informal multilateral organization through which these control efforts are coordinated is called COCOM (The Coordinating Committee for Multilateral Export Controls). This multilateral effort is essential to effective control because most of what we try to control is available from other COCOM members.

U.S. export licensing requirements are stricter than those of other countries and increasingly less effective because of the growing availability of comparable products from developed countries and from newly industrializing countries, such as South Korea and Brazil, who are outside the COCOM system. Exporters are particularly concerned with the large volume of exports that require licenses; the complexity of the regulations and the time required to obtain export licenses; licensing requirements for reexport of U.S.-goods, including parts and components; and foreign availability of goods and technologies subject to U.S. export controls. They fear that sales may be lost and the incentive for U.S. companies to develop new products and technology lessened. A recent National Academy of Sciences report found that, while controls do hamper Soviet acquisition of sensitive goods, they also have an increasingly corrosive effect on U.S. relations with other countries and make it harder for U.S. businesses to compete in the international arena. In addition to the concerns over national security controls, the use of export controls for foreign policy purposes is viewed by U.S. exporters as causing concern about the reliability of the United States as a trading partner. Such controls also adversely affect U.S. firms' investments in the targeted countries.

In several reviews of various aspects of the export control program, we concluded:

-- The list of controlled items and the number of required licenses is too large. Almost half the export license applications received each year could be eliminated without affecting national security. There is also potential for further reducing license requirements for exports to countries who cooperate with the U.S. in controlling exports to the Soviet Bloc.[1]

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[1] Export Control Regulation Could be Reduced Without Affecting National Security (GAO/ID-82-14) May 26, 1982.

-- In 1985, (when the Defense Department began its review of selected free world license applications), the Commerce Department approved licenses in about two-thirds of the cases for which Defense recommended denial. Defense generally based its denial recommendations on general concerns and did not have specific adverse information with respect to individual license applications to support its denial recommendations. Basically, Defense and Commerce differed with respect to policy issues.[2]

-- Controls imposed for foreign policy reasons are largely symbolic. Under these circumstances, even the availability of comparable products from other countries does not limit the imposition and maintenance of foreign policy controls. Consequently, the costs of symbolic controls are borne by American businesses in the form of export sales lost to firms in other countries that continue to export to the country that is the target of the controls.[3]

CURRENT GAO WORK

Currently our work on export controls covers such matters as:

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[2] Export Licensing: Commerce-Defense Review of Applications to Certain Free World Nations (GAO/NSIAD-86-169) Sept. 16, 1986.

[3] Export Controls: Assessment of Commerce Department's Foreign Policy Report to Congress (GAO/NSIAD-86-172) Aug. 19, 1986.

-- Export and import provisions of the Libyan Sanctions Program.

-- Defense Department's implementation of and current issues relating to the militarily critical technologies approach.

-- Implementation of the 1985 foreign availability statutory provisions relating to export controls. In recent testimony we reported the following preliminary findings:
  - The 1985 amendments were driven by congressional interest in reducing the number of products and related technologies subject to export controls. This has not occurred.
  - It has taken Commerce considerably longer than it originally envisioned to complete foreign availability assessments, due to difficulties in reaching agreement with Defense and developing the information to assess foreign availability.
  - There are apparently various policy and coordination problems between Commerce and Defense involving the sharing of information, the evidence required to support a determination of foreign availability, and the lack of an expeditious approach to resolving differences over what the evidence means.
  - There have been very few requests for foreign availability determinations from U.S. firms and technical advisory committees. Technical advisory committees, each typically including government members

from a number of agencies and members of firms that are engaged in working with the technology in question, assist Commerce in administering export controls.
  - U.S. multilateral control commitments need to be considered in the foreign availability process.

-- And lastly, with respect to foreign policy controls, as you know Mr. Chairman the Export Administration Act, as amended requires that the Secretary of Commerce may impose, expand, or extend export controls for foreign policy purposes only if he first (1) consults with Congress, (2) makes certain determinations regarding the impact, significance, and effectiveness of proposed controls, and (3) reports to the Congress. The Act also requires the GAO to assess the Secretary's report to the Congress to ensure that it has fully complied with the statutory reporting requirements. We are currently making an assessment of Commerce's foreign policy report to the Congress that extends with one exception, the foreign policy export controls in place as of January 20, 1987. The controls on exports to the Soviet Union of oil and gas equipment and technology are not being extended.

Mr. Chairman this concludes my statement. I will be happy to answer any questions you may have.

darity within Poland itself. In retrospect, I believe that policy did quite well.

I believe there was also never any question that these controls were foreign policy controls.

Mr. Chairman, based on my doctoral work in power politics, geopolitics and international economics, I appreciate the intimate interrelationship of policy and economics. Even though many of my industry friends would like to see a complete separation between economics, trade, and finance on the one hand and foreign policy on the other, I know that's impossible because it would eliminate the major source of our nation's power to achieve its international objectives.

However, having said that, it does not mean that the business community is not entitled to a great deal more predictability and consistency in this area, nor does it mean that Government policymakers, including the Congress, should not exercise caution and prudence in the use of our economic power for political ends.

A clear and unambiguous distinction must be made between foreign policy and national security controls. Otherwise, the objectives of controls are undermined and the entire system is subjected to attack.

Furthermore, it is my personal view that the export community has long been forced to bear the major share of the burden created by foreign policy controls.

In the future, policymakers should look to the import and the financial side of the equation more than they have in the past.

CREATION OF AN OFFICE OF STRATEGIC TRADE

Mr. Chairman, in 1980, I recommended the creation of an independent Office of Strategic Trade to administer all export control functions. I believe the inability of the agencies involved in the export control process to reach agreement and function on a cooperative basis highlights the need for such a centralized office today more than ever.

In my view, it is the only solution which will give the business community a central point of contact for all controls and give the Congress an organization accountable to the intent of the law.

My testimony in 1980, Mr. Chairman, laid out the reasons why I believe that the centralized, independent office would be the only agency able to deal with the conflicting policy biases of all the relevant agencies.

I think that's more appropriate today than ever before. There is much precedent to do this. The International Trade Commission, OPIC, Eximbank are all independent agencies, all with a narrow, specific purpose.

I think the suggestion is still viable and I make it again today.

Mr. Chairman, in closing, I'd like to make a few general observations about our international economic policy generally as it relates to the export control system.

Strategic and economic assessments of proposed regulatory and legislative changes are not clear-cut, nor have all the comprehensive implications of those proposals been discussed.

What is the implication, for instance, of a more liberalized East-West technology transfer policy on trade patterns generally, on OECD competitiveness and the competitiveness of the high debt LDC's?

To frame this issue properly, we need to keep in mind that the single greatest impediment to East-West trade is not CoCom controls, but the lackluster economic performance of the CEMA countries themselves.

Throughout the 1970's, while most developed countries moved ahead, Eastern Europe managed to slide into the debt crisis. In the early 1980's, world raw material prices collapsed, dragging down the U.S.S.R.'s economy.

Since then East-West trade has remained in the doldrums. A major inhibiting factor, in addition to those I mentioned, is the inability of the CEMA countries to produce goods that are competitive on the international markets.

The granting of MFN treatment helps a little bit, but it does not go to the root of Eastern Europe's inability to earn hard currency with which to finance imports. I repeat—it is their inability to finance imports that acts as the greatest barrier to expanded East-West trade. CoCom's export control regulations, though important to the management of trade flows are actually the least important part of the equation, in my view.

The East Europeans and the Soviets are now turning to us to help them solve their competitiveness problems. They've embarked upon an export-led growth strategy, as many developing countries have done that is based upon technology imports and product exports.

To be specific, given their hard currency constraints, they are asking for our credits, our technology and guaranteed access to our markets. In short, even if we liberalize the controls, there will be no substantial boost to U.S. exports. It is only if we provide the credits, the know-how and the markets that East-West trade will begin to rise above present modest levels.

Why is this a bad idea? Because it would degrade our national security arms control prospects as I pointed out. In addition, there are dangers we face in building the U.S.S.R.'s export capacity. The Soviets' mercantilist trade practices have crippled Eastern Europe's development and could threaten western industries. We need to remember that the Soviets are pushing very aggressively to move away from their dependence on oil as an export earner, so they are prepared to take forceful steps to penetrate Western markets. Unlike the PRC, the Soviet Union is unable to qualify for membership in the GATT or other international economic institutions.

Its much vaunted reforms fall far short of what is required to introduce free market principles by which fair pricing of goods can be determined. Also, the U.S.S.R. is certainly not committed to the stability of the international financial system, as demonstrated by its unrelenting attacks on the Baker plan, so that any enhancement of its international economic role should be viewed with great skepticism.

We also need to remain aware of the special needs of the developing countries, particularly the democratic high debt LDC's. I needn't point out that the LDC's are also clamoring for credit, technology and market access. It seems to me that we should be looking to meet their needs first. These countries, whose very survival depends upon access to OECD markets have the most to lose. When the East European joint ventures come on stream, exports of intermediate range goods from the Soviet bloc, such as textiles, machine tools, and electronic equipment would displace sales from the developing world.

Mr. Chairman, my remarks have been intended to draw your attention to the fact that we should have our eyes wide open about what impact proposed legislative and regulatory changes that are being considered will have on the control system, on the strategic balance, and on America's national competitiveness.

[The complete prepared statement of Lawrence J. Brady follows:]

TESTIMONY OF
LAWRENCE J. BRADY

Subcommittee on International Finance
and Monetary Policy
of the
Committee on Banking Housing and Urban Affairs

United States Senate

March 17, 1987

MR. CHAIRMAN: I appreciate the opportunity to testify in an area that I believe is crucial to the well being of our national security and the well being of American industry.

I should note that my testimony does not necessarily reflect the views of my company. They are my observations, based on five years as Deputy Director and Acting Director of the Commerce Department's Office of Export Administration, and subsequently, as Assistant Secretary in charge of this area for the first three years of the Reagan Administration. Needless to say, my private sector experience, since leaving Commerce, is a factor in shaping these observations. I have been involved in international business development and international marketing for the last three years. I know firsthand the impediments U.S. industry faces overseas.

My objective today is not to address each of the hundreds of suggestions that have been made to you to "improve" the Export Administration process but rather to make some more macro-oriented observations on what I believe are the fundamental problems that continue to plague the system.

I would like to first draw attention to what I believe should be fundamental distinctions to put this entire discussion in proper perspective. Three general areas continue to be confused and intermingled and I believe deter from our ability to identify the proper and adequate solutions.

I believe it is imperative that we distinguish for export control purposes, East-West trade, West-West trade and controls for foreign policy and national security reasons as applied to both East-West and West-West trade.

MR. CHAIRMAN: I would first like to address the East-West export control area.

We need to keep in mind that the export control debate sometimes veers off in the wrong direction. The real issue in the East-West context is not the competitiveness question, namely whether we have handicapped U.S. producers vis-a-vis foreign competition. Based on testimony I've seen and comments in the press, the thrust of proposed improvements are being advocated in terms of increasing America's competitiveness. While I agree that by streamlining the export control system, particularly with regard to West-West trade, we will improve American industry's ability to compete, I believe structuring the debate in this context does a disservice to the national security export control debate and diverts our attention from the root causes of our competitiveness problems. We should not deceive ourselves into thinking that we are really going to substantially improve America's competitive posture by changing the export control process to permit more exports to the USSR and Eastern Europe.

The key issue is examining the East-West export control system is to assess whether the system is functioning properly as a part of our overall strategy for dealing with the Soviet challenge. The function of the export control system is to ensure that our lead time in technology -- which provides us with qualitative superiority on the battlefield -- is adequate to offset the Warsaw Pact's quantitative superiority.

In the early 1970's, I served in the State Department and the Council on International Economic Policy at the White House, when the U.S. first took a look at relaxing export controls. At the time it was felt that a modest increase in the transfer of advanced technology would pose few substantial risks to U.S. security. It was believed that the Soviets were interested in building up the civilian sector of their economy, and would not jeopardize their access to western products by diverting technology to the military or acquiring it illegally. Most importantly, we assumed that we could offset the erosion of NATO capabilities implied in West-East technology transfers by stepping up our own defense efforts.

The experience during the 1970's of expanded East-West trade in high technology goods calls these assumptions in question. The Soviets did not place priority on civilian industries. Quite the contrary, they increased the flow of resources to the defense sector during the 1970's and into the 1980's. The Soviets diverted a substantial share of imported technology into military production, and perfected an elaborate, government-wide apparatus specializing in illegal acquisitions. Most disturbingly, NATO countries proved unwilling to devote adequate resources to building up their conventional forces to compensate for technology leakage. An overwhelming Soviet superiority in conventional forces in Europe has been the unfortunate result of these developments.

I want to dwell on this point for a moment because of the changed security environment we might find ourselves in as a result of a possible agreement in Europe on elimination of intermediate range missiles. Only now that such an agreement is within sight is serious attention being given to the new requirements that will be imposed on NATO countries to improve their conventional military capabilities. I believe one of those requirements ought to be a renewed commitment to a strengthened export control system. It would be a grave mistake, in my view, to deemphasize the nuclear deterrent in the European theater if the conventional deterrent is inadequate to defend NATO countries against potential aggressors. To rebuild that conventional deterrent, we must spend more, and we must take every step to protect our technological lead time. To do otherwise is to invite attack and to lower the threshold for conflict in Europe, which none of us wants.

But, this does not mean that the export control list should be looked upon as a static one. It is dynamic because the technology it seeks to control is in dynamic change.

Thus the control list should be reviewed continuously to streamline and strengthen the list. I believe that the Defense Science Board Task Force recommendations of ten years ago still contain the relevant guidelines to accomplish this task. Even though a lot has changed in that ten year period and the control system has been improved I do not doubt that it can be improved further.

That most important finding of the Board was that we should control revolutionary rather than evolutionary technology, and move the governments resources away from an intensive focus on product reviews and look at evaluating technology transfers. Ten years later the export control system still has not made allowances for distinguishing between evolutionary and revolutionary transfers.

The single biggest problem is that our technology list is still weighted toward products. We try to control all exports containing useful technology. The single most important criteria should be the degree to which a potential sale advances the capabilities of our adversaries.

The new situation in Europe may make the task that much more critical. Last week's cover story in U.S. News & World Report draws attention to the role that smart weapons will play in future military encounters. Anyone reading that article must come to the conclusion that our export control system must play a more critical role than ever, in assuring that the USSR does not get the critical technology essential for improving their high technology defense capability in areas like electronic warfare, electronic countermeasures, low altitude radars, Forward Looking Infrared Radar (FLIR), laser bombs etc.

As we review the East-West COCOM list for the possible decontrol of items, then, we should focus on the specific military capabilities we are transferring with each sale. The question ought to be -- how many sales of a particular technology over time will have a degrading effect on our qualitative superiority in conventional forces and what will be the resulting impact on our defense budget to compensate for that degrading. Unless our military advisors are comfortable with the answers, I believe we should be cautious in our approach to decontrol, and place greater effort in obtaining multilateral cooperation in COCOM and elsewhere to remove the foreign availability.

I mentioned a moment ago that I thought the Defense Science Board Task Force recommendations of ten years ago were still valid. They have not been fully implemented by a long shot.

MR. CHAIRMAN: I believe it would be appropriate for the Congress to ask the Secretary of Defense to reconvene the Board for the specific purpose of reviewing the developments of the last ten years in the context of the original recommendations of the Board and submit a report to the Congress within a time certain.

The National Science Foundation has its views as does the GAO and many private sector organizations. I believe it is appropriate that the group that began the discussion on the issue take a look at it again.

I would now like to turn for a moment to the West-West export control area. The basic reason we have controls on West-West trade is to preclude diversion through re-exports, and from illegal exports, from third countries to the USSR and Eastern Europe. As the Soviet effort to gain Western technology illegally was discerned, we have reacted by extending controls on exports to non-communist countries and even to the COCOM countries which are supposed to subscribe to the same control system as we do.

MR. CHAIRMAN: To the extent that there is as competitiveness element to the export control debate it is in West-West trade arena.

The West-West control area is one on which I have had fundamental disagreements with the Department of Defense because it is in this area that control can strike at the core of our industry's ability to compete.

I believe we have been going down the wrong path in effectuating a policy to prevent diversion to controlled destinations. We must not close our borders but rather control the borders of the group of countries with which we maintain the control system - the COCOM countries and other countries with which our trade and market is an important factor.

I am not suggesting that we eliminate free world export controls, quite the contrary, I suggest that all regulatory and legislative changes should have a security and economic impact assessment to justify the changes. But I also believe that if the Congress, and the Executive believe we should move to reduce intra-cocom and free world controls, then it is incumbent upon us to make certain that the enforcement mechanism is adequate to prevent diversion to the Soviet Union.

MR. CHAIRMAN: I believe that time has come for the United States to make a link between violation of the COCOM rules to violation of international trade rules, generally. I believe we should amend Section 301 to the Trade Act to provide for petitions by private individuals, companies or government bodies to be filed with the Special Trade Representative if an aggrieved party has reason to feel that one of their competitors in a foreign country, is violating the COCOM agreement and exporting to a controlled destination without the required COCOM approval. In my experience, the American manufacturer is the best watch dog and policeman for the COCOM system. He knows because of his dealings overseas and the competitive climate he functions in when an export has taken place, to where, etc. What better way to assure the sanctity of the COCOM agreement than to give it some enforcement teeth. With regard to the less developed countries and particularly to the NICS, should we not ask them to choose what market they are more concerned about? If they do not want to abide by COCOM controls with respect to COCOM-controlled products, then I propose that any special trade privileges such as the General System Preferences (GSP) be cancelled for those countries.

MR. CHAIRMAN: What I am suggesting is that we make our trading partners choose which market they want most. If they cannot abide by the COCOM controls, which are critical to our national security interests, then penalties should be imposed on those companies' exports to the U.S.

Further, I believe it is appropriate for the Congress to direct the Administration to undertake an intensive negotiating

Senator **Sarbanes**. Gentlemen, thank you very much. Let me put this question to you. On the question of West-West trade. First of all, it's asserted that the current limitations result in purchasers in, say, Western Europe not wanting to have American goods or American components, because of the restraints we place on them, not going to East, but simply moving within the West. And here are two examples this morning. One within a country, and then, of course, the transfer from one country to the other.

RE-EXPORT REQUIREMENTS

Should we be moving in the direction of easing that up and what purpose do the re-export requirements serve?

Mr. **Brady**. The re-export requirement, in my view, Mr. Chairman, is primarily used as a means to prevent diversion. It is the paper trail, in essence, which the Customs Service, and the Commerce Department enforcement types use to try to get at the diversion, to see what's taken place. Should we move to eliminate re-export controls? I think, unquestionably. It is something that I worked on 3 years or 4 years ago. I think we may be putting the cart before horse in one respect however.

All of the statements that have been made to you and the recommendations that have been made to you, including the National Academy of Sciences, stress the need to consult with our allies.

In fact, with respect to all the changes being considered Mr. Chairman, there has been no consultation with them. It is my understanding, the actions being undertaken, both from a regulatory standpoint and the actions being considered in Congress are not being discussed with our allies.

I think the most important point about West-West trade, which I tried to mention, is—yes—we can decontrol intra-CoCom re-export requirements, but we should build up the enforcement effort while we are doing that. Now there have been giant strides made in the ability to produce computer link analysis, using Census data, Customs data, and reports that industry has to submit on what they have exported, and running all the tapes against each other and coming up with leads when diversion might be occurring, i.e., which ports of exit are the major diversion routes, et cetera.

When I suggested that you direct the administration to begin a negotiating effort, what I am saying is, there is absolutely no reason our CoCom partners cannot also put those same kind of computerized procedures into effect, where we can compare, and we can join—the Custom Services of both countries can join to use this data in a real enforcement effort.

So my answer to you, my long-winded answer to you is, yes, we can decontrol intra-CoCom, but we should increase the enforcement effort.

And last, what real leverage have we got? What is the one lever we've got? And I think in the final analysis, Mr. Chairman, it is what we have always been unwilling to use, and it is our market. That is why I recommend section 301 to give our competitors in this country, the American manufacturer, the ability to come before the Government and say, I know that such-and-such a country or an exporter in Japan or France or Germany or wherever it may be, is violating the CoCom rules, I know that this and this computer was exported, and file a complaint under sec. 301. Require that complaint to be investigated, and use the trade retaliation authority to punish either the foreign company or the country involved.

Senator **Sarbanes**. Now CoCom, at the moment, is an informal arrangement; is it not?

Mr. **Brady**. Nevertheless, it is an agreement. Executive agreements, Mr. Chairman, have the force of law, internationally.

Senator **Sarbanes**. Mr. Mendelowitz.

Mr. **Mendelowitz**. I think that we should put what we are doing in perspective. We think export controls make an important contribution to national security. But let's not go overboard on how much reliance to place on them. When you look at the full range of ways in which the Soviets gain access to our technology and our weapons systems, espionage ranks as a much more important one. There is a whole range of ways in which the Soviets are able to get things. Diversion of civilian products that have military applications is one component, but it is a relatively small component.

So I think that we should keep in perspective exactly what we are dealing with in terms of its contribution.

Second, in terms of what we try to do with respect to the Soviet Union and its access to our technology via our export controls, we are really not trying to hermetically seal our borders, or the borders of CoCom for that matter, but we are trying to put in place a system which, in effect, is a sieve that complicates the ability of the Soviets to gain these items; that delays the ability of the Soviets to gain these items; that adds uncertainty to the ability of the Soviets to gain these items and raises the cost to the Soviets to gain these items.

When we talk about the issue of controlling, not controlling, decontrolling, components based on U.S. technology in products manufactured in other countries, we have to bear in mind that if the end product is being controlled for national security purposes and the country of origin manufacture is a CoCom country, that item will not be decontrolled. So I don't have great concern about that.

Second, if the product is not being controlled, then the controlled componentry, so to speak, becomes one small piece of a final product, and the question to ask is, how much do we want to make the Soviets pay for it. For example, if they want a small microprocessor that represents 5 percent of an item or 10 percent, 20 percent, 30 percent, where do we draw the line? Do the Soviets have to pay 2, 3, 4, 5, 10 times the cost of the item to get it, because it is embedded in something?

Where do we draw the line? I think, basically, we've paid a high price. The manufacturers believe they have paid a high price in lost sales.

We have heard lots of stories for a good many years now where U.S. components are being designed out of foreign products because of the issue of export controls and control of components for reexport. I think that is an important issue we have to face up to, and that is, the lines should be drawn at a level where for what the Soviets get—it is going to cost them a lot, but at the same time where we draw the line doesn't continue to impede the ability of

U.S. suppliers to supply parts and technology to foreign manufacturers.

Senator **Sarbanes**. How do you weigh, in that approach, the importance of the component in national security terms, other than just the dollar value, which I assume the other side is prepared to discount, if the component is important enough? I am really searching for an answer. How do you come to grips with the fact that a 30-percent component in value might be extremely important in security terms, and that just putting a dollar figure on it does not address that question.

Mr. **Mendelowitz**. My understanding is that the Soviets have substantial domestic capability to produce a wide range of military systems. We have certainly seen that capability. Basically, what the West represents for the Soviets with respect to a wide range of items is a cheaper product. So that if they want a microprocessor that costs $3 that is in a product that costs $40—well, there is some trade-off. One of the things that I think we have to recognize in the export control area——

Senator **Sarbanes**. Now let me bring you back to the question. I don't want you to slide off of it.

SCREENING PROCESS

You have a component which has a significant security value. How does letting it pass through simply on the basis of the dollar valuation provide an adequate screening process to prevent the transfer of that important technology as opposed to looking at the technology and making a judgment about it?

Mr. **Mendelowitz**. I think you have to draw a distinction between a particular bit of technology, a particular item that has—remember, we're talking about civilian products now. We're not talking about military products. I think you have to draw a distinction between something that may have——

Senator **Sarbanes**. We are essentially talking about dual use products.

Mr. **Mendelowitz**. If you were to take an item that had such overwhelming military significance and the case were clearly made and the case were clearly understood that this item had overwhelming military significance, I think that this is the type of item where there will probably be universal agreement that that item will be controlled, and it will be put in a separate category and not permitted to be handled in a more customary or general way.

Senator **Sarbanes**. You're, in effect, saying that if you have this rule, you are going to have an exception to it.

Mr. **Mendelowitz**. Sure. Just like with respect to distribution licenses. Under the old rules on distribution licenses, there was a wide range of items that were shipped out to distributors without individually validated licenses, but even though we had this rule and this rule made sense from a national security perspective, and it made sense from a commercial perspective, there were items which could not be shipped out under a distribution license. So I think the concern which you raised, namely, that there is an item which has such overwhelming military significance, then that item, I think, would and properly should be closely controlled.

Senator **Sarbanes**. Of course, the use of the word "overwhelming" doesn't answer the problem. The problem is always at the margin. How do you make the judgment.

Mr. **Mendelowitz**. It is interesting that you raise that point at the margin, because in the export control area, decisions aren't made at the margin. I will give you an example. When the Defense Department decides how many airplanes it is to buy, how many ships to buy, how many tanks to buy, how many soldiers to field in uniform, they never get everything they want. They don't get all the ships. They don't get all the planes. They don't get all the uniformed troops, and they don't get all the tanks. And they don't get it, because there is a budget constraint placed upon them.

Congress appropriates a certain amount of money, and then, given the limit on the total appropriation that is made for national defense, tradeoffs and judgments have to be made about what is the best way to invest these resources for our national security. In the export control area, we don't have budget constraints. Everything that is deemed to have some military utility finds its way onto the list, not militarily critical, but militarily useful. The problem with the control list is very much like the problem with Government regulation. When the era of regulatory reform began in the 1970's, the Government was pursuing a lot of public policy objectives, very worthy public policy objectives with Government regulation, which imposed very little cost on the Government, in terms of budgetary expenditures, but imposed very substantial costs upon the private sector and upon the citizenry as a whole.

When the aggregate cost of Government regulation was made clear, there was some pulling back in recognition of the fact that even though there is no appropriation of public funds, not every desirable goal can be achieved through Government regulation, because we can't afford to do it. And I think that the problem with export controls falls into that same category. They haven't been making the kind of marginal analysis that you mentioned.

Senator **Sarbanes**. Mr. Brady, the GAO has issued a report that export control legislation could be enacted without affecting national security.

One of the things Mr. Mendelowitz has highlighted this morning is the list of controlled items and the number of foreign licenses is too large.

You don't disagree with that assertion, do you?

Mr. **Brady**. No.

Senator **Sarbanes**. Then they go on and say almost half the export license applications received each year could be eliminated without affecting national security.

Do you agree with that?

Mr. **Brady**. Mr. Chairman, I have real difficulty using an empirical, quantitative approach to what is a very subjective evaluation of what we should be looking at.

HOW TO REDUCE CONTROLLED ITEMS

Senator **Sarbanes**. Yes. Let me put this question to you. If there is general agreement that the list of controlled items and the number of required licenses is too large—and virtually everyone sort of seems to take that view—how do you reduce the list of controlled items and the number of required licenses in some effective way?

Mr. **Brady**. I mentioned in my testimony, Mr. Chairman, that I thought the guidelines and the directives of the Defense Science Board of 10 years ago were still relevant; namely, move away from a product-oriented list, look at design, manufacture and production technology.

Now, having said that, one of the reasons I suggested——

Senator **Sarbanes**. What standard do you think that would give you if you did that? What standard could you reach out there and use that would reduce the list of controlled items and the number of required licenses that would shear away from this system much of what people assert serves no real national security purposes; it is harassment; it is impeding trade, and so forth?

Mr. **Brady**. I think clearly we should start with the AEN list. That is your starting point. Unquestionably, they are the lower level technology product areas.

As you were speaking, I thought again the U.S. News & World Report article, and I really think it is a good layman's article in terms of enlightening us—when we talk about civilian technology,—you correctly said dual use—on the role of dual use technology in smart weapons, for instance, which is what we are going to have in the future, is a critical role.

Now, the article says the key ingredient of these smart weapons is miniature computers. Can we keep all miniature computers away from the Soviet Union? I doubt that. Can we keep the design, manufacture, and production technology away from the Soviet Union? If we don't try, we are in deep trouble.

Mr. Chairman, that is the distinction that Fred Bucy, who chaired the original Defense Science Board task force, has made repeatedly, what I am saying is that Bucy is right and that the list is product weighted. There are too many products on the list.

Having said that, however, that doesn't necessarily translate that when one of those products is less than 35 percent in value of an end product, that if necessarily should be decontrolled.

There should be some other way of looking at the decontrol mechanism. That is why I have come to the conclusion that organizational and administrative changes are needed to get this done.

I will tell you very honestly I don't think we are ever going to get what you want done in this process as long as we have the division of authority that we have now between 46 agencies that impact one way or another on the export control process. I think you have got to establish a central point of focus and say, you are accountable to me, the Congress, and to the President, and if you can't resolve those issues, it is that agency that is responsible for elevating them for the President.

Senator **Sarbanes**. Well, that is your idea of an Office of Strategic Trade, which you would have as a totally independent office outside of any department?

Mr. **Brady**. Absolutely.

Senator **Sarbanes**. Has the GAO looked into those kind of organizations?

Mr. **Mendelowitz**. We have looked at issues of reorganization, and while we haven't established a public opinion to date on the issue of the Office of Strategic Trade, based on the work we have done we have generally not considered that a very effective way to deal with problems, primarily because if you are dealing with a national security issue the Defense Department must of necessity be involved. If you are dealing with a national security process that relies on intelligence information, the intelligence community needs to be involved. If you are involved with trade issues, the Office of the United States Trade Representative and the Commerce Department need to be involved.

Just creating a central bureaucratic organization with the title of Office of Strategic Trade does not eliminate or remove the genuine concerns of all the other agencies to pursue their mandates and their responsibilities.

Mr. **Brady**. Mr. Chairman, may I comment on that for a moment?

Senator **Sarbanes**. Mr. Brady, I know it is your baby, and you are entitled to make a response. [Laughter.]

Mr. **Brady**. Prior to the early 1980's, the Commerce Department basically functioned in that role,—in the role that I am suggesting an independent office should assume.

The fact that you now have 140 positions in the Department of Defense is of very recent vintage. What I am suggesting is that you take those 140 positions, you take the Commerce positions, you meld them together, and you make sure that it is still a security agency in the sense that they have access to the Defense labs and the DOE labs. Also the agencies would continue to have regular imput into the Office of Strategic Trade on cases and issues.

Mr. **Mendelowitz**. I would suggest, Mr. Chairman, that you can deal with the problem Mr. Brady cited by coming to grips with the ambiguities in 10G. You can restore the status quo ante that Mr. Brady said functioned well.

Mr. **Brady**. No, I didn't say it functioned well. I am on record as saying it was a shambles, but they had the authority.

Mr. **Mendelowitz**. Well, you can restore the status quo ante with improvements.

Mr. **Brady**. That is the problem, the biases preclude the trust being placed in one of the compelling agencies.

Senator **Sarbanes**. Mr. Brady, I think we have had the back and forth on that end of the development.

If the private parties were to try to enforce the CoCom rules, would it not be perceived by the CoCom members as part of a—first of all, that is a heavy burden in a sense to throw on the private parties?

Second, would it not be perceived as part of an economic warfare rather than relating to strategic interests?

At least now it comes from the Government level and carries with it a strategic perception. If you allow it to be invoked at the private level—it is quite true they are very much aware of what is happening on a competitive basis.

But isn't there the real danger that it is going to be perceived by others as part of an economic effort rather than reflecting a strategic concern?

Mr. **Brady**. Mr. Chairman, as Assistant Secretary, I also administered the unfair trade laws—the countervailing duty and the antidumping law. What I am suggesting is that we apply the same rules that are applicable to unfair trade practices generally with our trading partners, to the strategic area.

It is no great task on the individual exporter. All he must do is file a petition, and the U.S. Government then must conduct an investigation of whether in fact the CoCom agreement has been violated and U.S. industry put at a disadvantage.

And if the recommendation to the President is that that is the case——

Senator **Sarbanes**. Do you think the CoCom countries would agree to that?

Mr. **Brady**. I don't think it is a question of whether or not they would agree to it. I think it is a question of the United States, as we move to decontrol these products in the West-West area, that we assure ourselves that we nevertheless protect the integrity and the sanctity of the multilateral system.

Mr. **Mendelowitz**. Mr. Chairman, following this hearing I will be going over to testify the Finance Committee on section 301.

We did an assessment of the experiences with 301 during the past half dozen years, and basically, based on the past effectiveness of 301 in remedying unfair trade practices, we would not view using section 301 to deal with export control issues as a very promising alternative.

Senator **Sarbanes**. Gentlemen, thank you very much.

You have been a helpful panel. We appreciate your testimony.

The committee stands adjourned.

[Whereupon, at 11:45 a.m., the subcommittee adjourned, subject to the call of the Chair.]

[Reponse to written questions and additional material supplied for the record follow:]

effort with our allies and other appropriate countries to develop and coordinate an enforcement mechanism to preclude diversion to controlled countries and report back to the Congress within a time certain on the result of those efforts. Any benefits that may accrue to COCOM and free world countries by legislative and regulatory changes should be contingent upon their coordinating and implementing an enforcement mechanism as equally as effective as the enforcement regime in the U.S.

I would now like to address the third area I mentioned namely foreign policy controls as they apply to both East-West and West trade.

We must distinguish between national security and foreign policy controls and that distinction must not be blurred. One of the most fundamental concerns of the business community is to know where it stands, vis-a-vis, the trade regulatory apparatus and the foreign policy area is a major source of confusion. For example, a sale of computers to Iran is front page news in many newspapers, yet, in reading those stories, which quote a number of government officials, one is left not knowing whether these items are controlled to Iran for foreign policy or national security reasons. I am struck that these computers apparently can go to the KGB in Moscow, cannot go to South Africa, but can go to Iran. Is not the human rights situation in Iran as bad as in South Africa? MR. CHAIRMAN, what is the basis for this

absolutely conflicting and irrational policy other than the policy biases of three separate agencies involved in the process and probably the Congress itself.

Take another case in the foreign policy area which I believe is one of the major foreign policy successes of this administration - namely, the Pipeline Sanctions. At least partly as a result of these controls the second strand of the Siberian Pipeline is not going to be built. The Norwegian off-shore gas reserves are going to be exploited and West European dependency on Soviet gas will be limited. These were all the primary objectives of those sanctions as well as aiming for a reconciliation between the church, government and solidarity within Poland itself. In retrospect, I believe that policy did quite well.

I also believe there was never any question that these controls were foreign policy controls.

Based on my doctoral work in power politics, geopolitics and international economics, I appreciate the intimate interrelationship of policy and economics. Even though many of my industry friends would like to see a complete separation between economics, trade, and finance on the one hand and foreign policy on the other, I know, that is impossible because it would eliminate a major source of our nation's power to achieve its international objectives. However, having said that, it does not mean that the business community is not entitled to a great deal more predictability and consistency in this area, nor does it mean that government policy makers, including the Congress, should not exercise caution and prudence in using our economic power for political ends.

A clear and unambiguous distinction must be made between foreign policy and national security controls otherwise the objectives of controls are undermined and the entire system subjected to attack.

It is my personal view that the export community has long been forced to bear the major share of the burden created by foreign policy controls. In the future, policy makers should look to the import and financial side of the equation more than they have in the past.

MR. CHAIRMAN: In 1980, I recommended the creation of an independent Office of Strategic Trade to administer all export control functions. I believe the inability of the agencies involved in the export control process to reach agreement and function on a cooperative basis highlights the need for such a centralized office more than ever. In my view, it is the only solution which will give the business community a central point of contact on all controls and give the Congress an organization

accountable to the intent of the law.

MR. CHAIRMAN, in closing, I would like to make a few general observations on our international economic policy generally as it relates to the export control system. Strategic and economic assessments of proposed regulatory and legislative changes are not cleancut nor have all the comprehensive implications of those proposals been discussed. What is the implication for instance of a more liberalized East-West technology transfer policy on trade patterns, OECD competitiveness, and the competitiveness of the high-debt LDCs. To frame this issue properly, we need to keep in mind that the single greatest impediment to East-West trade is not the COCOM controls but the lackluster economic performance of the CEMA countries.

Throughout the 1970's, while most developed countries moved ahead, Eastern Europe managed to slide into the debt crisis. In the early 1980's, world raw material prices collapsed, dragging down the USSR's economy. Since then East-West trade has remained in the doldrums. A major inhibiting factor -- in addition, to those I have mentioned -- is the inability of the CEMA countries to produce goods that are competitive on international markets. The granting of MFN treatment helps a little, but it does not go to the root of Eastern Europe's inability to earn hard currency with which to finance imports. I repeat -- it is their inability to finance imports that acts as the greatest barrier to expanded

East-West trade. COCOM's export control regulations -- though important to the management of trade flows -- are actually the least important part of the equation.

The East Europeans are now turning to us to help them solve their competitiveness problems. They have embarked upon an export-led growth strategy -- as many developing countries have done -- that is based upon technology imports and product exports. To be specific, given their hard currency constraints they are asking for our credits, our technology, and guaranteed access to our markets so that they can diversify their export base.

In short, even if we liberalize the controls, there will be no substantial boost to U.S. exports. It is only if we provide the credits, the know-how, and the markets will East-West trade begin to rise above present, modest levels.

Why is this a bad idea? It is because it would degrade our national security arms control prospects, as I pointed out above. In addition, there are dangers we face in building the USSR's export capacity. The Soviets' mercantilist trade practices have crippled Eastern Europe's development and could threaten western industries. We need to remember that the Soviets are pushing very aggressively to move away from their dependence on oil as an export earner, so they are prepared to take forceful steps to

penetrate western markets. Unlike the PRC, the Soviet Union is unable to qualify for membership in the GATT or the other international economic institutions. Its much-vaunted reforms fall far short of what is required to introduce free market principles by which fair pricing of goods can be determined. Also, the USSR is certainly not committed to the stability of the international financial system, as demonstrated by its unrelenting attacks on the Baker Plan, so any enhancement of its international economic role should be viewed with great skepticism.

We also need to remain aware of the special needs of the developing countries, particularly the democratic, high-debt LDCs. I needn't point out that the LDCs are also clamoring for credits, technology, and market access. It seems to me that we should be looking to meet their needs first. These countries -- whose very survival depends upon access to OECD markets -- have the most to lose once the East European joint ventures come on stream. Exports of intermediate range goods from the Soviet Bloc -- such as textiles, machine tools, and electronic equipment -- would displace sales from the developing world.

MR. CHAIRMAN: My remarks have been intended to draw your attention to the fact that we should have our eyes wide open about what impact proposed legislative and regulatory changes will have on the control system, on the strategic balance, and on American competitiveness.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GARN FROM MALCOLM BALDRIGE

Q. 1. One effect of the Administration proposals is to shift the "balance of power" in interagency disputes toward Commerce and away from Defense. Yet this balancing of interests was at the heart of the compromise reached in the 1985 legislation. Why is it appropriate to revisit this issue now?

A. 1. The Administration's proposals do not "shift the 'balance of power' in interagency disputes toward Commerce and away from Defense." They establish a decision-making structure which recognizes the legitimate interests of all agencies concerned. The Department of Defense (DOD) would be able to raise its concerns to the President for any given issue. What is necessary, and what the Administration's proposals would provide, is a structured framework and timeframe within which certain issues must be pursued. This decision-making structure best serves the interests of U.S. business and the country as a whole. In a world market as competitive as the one we face, we need to establish an interagency mechanism that ensures timely and consistent resolution of disputes over export licenses.

Q. 2. Creation of an Undersecretary for Export Administration under the law is intended to ensure that export control issues do not become submerged within the broader mandate of Commerce to promote trade. Do you believe that it is appropriate for the Administration to suggest granting additional discretion over export control policy to the Commerce Department without the new Undersecretary in place?

A. 2. Although I continue to have reservations as to the necessity of creating an Under Secretary for Export Administration, plans are proceeding to ensure we meet the October 1, 1987, deadline. As

Secretary of Commerce, I have given high priority to the administration of an effective export control program for national security purposes. Trade Administration, which currently oversees export administration at the Assistant Secretary level, has grown since 1981 and is a crucial link in successful U.S. and COCOM country efforts to deny high-technology products of military significance to our adversaries. This success has occurred without a new Under Secretary in place. With respect to the granting of additional discretion to the Commerce Department, I would like to clarify that all actions taken to date in the export control area have been within Commerce's authority under the Export Administration Act. No additional discretion has been involved or suggested.

Q. 3. You propose to decontrol AEN-level technologies, remove reexport controls to COCOM, and remove reexport controls on parts and components by administrative action. Where does this process stand, and has the Defense Department signed off on these policies?

A. 3. After interagency consultation, including consultation with DOD, our proposals to remove licensing requirements for AEN level goods for COCOM destinations (GCOM), and certain AEN level goods for most other free world destinations (GFW), were published for comment in a Notice of Proposed Rulemaking. Published in final form, after the same notification and opportunity for review, were regulations eliminating licensing requirements for goods destined for certified end-users (GCEU) or cooperating governments (GCG), and regulations relating to reexport of U.S. parts and components. DOD agreed to these changes. The regulations eliminating reexport approval requirements for U.S. goods from non-U.S. locations into COCOM is still in the draft stage. We expect them to be published soon.

Q. 4. Commerce is instituting export license fees in the 1988 Budget. Am I correct in my understanding that these fees will not come back to the Commerce Department? Do you believe user fees are appropriate in cases where the user has no option -- pay the fee or stop exporting?

A. 4. You are correct. The fees collected under this proposal will go into the General Fund of the U.S. Treasury.

Our user fee proposal is part of the Administration's overall program to reduce the budget deficit by finding ways to help offset operating costs.

With regard to the appropriateness of user fees in cases where a user has no option but must procure the service in question, we have noted that there are ample precedents at the Federal, State and local levels.

The focus should be to set the fee at a level which does not constitute a significant disincentive to the pursuit of a beneficial activity, such as starting a business or sustaining trade. We think that the proposed modest fee structure is appropriate in the context of the current budget situation.

Q. 5. The U.S. contol system is based on the COCOM process, but the study would put even further emphasis on multilateral controls as the basis for U.S. policy. Do you believe that we should base our assessment of appropriate controls policy solely on what is achievable in COCOM and with other cooperative countries? What are the chances of negotiating a comprehensive and effective multilateral regime?

A. 5. Our controls policy is based on the national security and foreign policy interests of the United States. However, the United States can no longer claim to be the sole source of much of the strategic technology we attempt to deny our adversaries. Hence, unilateral controls, when the product is available from foreign sources, do not frustrate Bloc acquisitions and serve only to damage the competitive positions of U.S. companies. For this reason, it is imperative that we work within the COCOM framework to maintain multinational controls that are consistently enforced. Likewise, it is imperative that all COCOM members encourage third countries to adopt similar controls and enforcement programs. Only in this manner can we achieve the effective controls we want while ensuring fairness in the trade arena.

The chance of negotiating a comprehensive and effective multilateral regime appear excellent at the present time. A series of COCOM meetings that started the first of this year, and will continue through July, is focused on all three critical elements in the control system: an updated controlled commodities list, uniform application of controls, and increased attention to enforcement.

Q. 6. I am about to reintroduce my financial controls bill that would grant the President authority to control financial flows to our adversaries. By extending available controls beyond technologies to financing, we would get at the hard currency resources that fund technology acquisition and Soviet and terrorist adventurism worldwide. Do you believe that these gaps in our export control law should be filled?

A. 6. The Administration opposed the financial controls bill on its first introduction. A primary reason was that money is fungible; foreign banks would gladly take over any market vacated by U.S. banks, rendering unilateral controls ineffective at best and counterproductive at worst. Moreover, current loans by U.S. banks to the U.S.S.R. and other Bloc countries are negligible, so there is no need for financal export control legislation. Overall, we do not think that the gains offered by such legislation warrant the potentially negative effect it could have on the U.S. banking industry.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GRAMM FROM
MALCOLM BALDRIGE

QUESTION:

How many specific official requests for foreign availability assessments of items controlled under Section 5 of the EAA were received by the Commerce Department since July 11, 1985 from U.S. businesses? How many of those were received in calendar year 1986? How many were received during the first three months of 1987? What were the specific items for which a foreign availability assessment was requested?

How many specific foreign availability assessment requests were made by Technical Advisory Committees during those same periods? What were the items and which TACs made the requests?

ANSWER:

Between July 11, 1985 and April 20, 1987, 25 requests were received from U.S. businesses for foreign availability assessments of items controlled under Section 5 of the EAA. Twelve requests were received during calendar year 1986, and 5 requests were received during the first 3 months of 1987. The specific items were:

- Wire Bonders
- High-Speed Uncooled Infrared Laser Detectors (decontrolled West-West 10/22/86 and West-East 3/17/87)
- Glass Microspheres
- Die Bonders
- Digital Stored Program Controlled Central Office Circuit Switching Systems
- Optical Fiber Fusion Splicers
- Graphite Pre-Preg Production Equipment
- Isopropyl N-3-Chlorophenyl Carbamate
- CNC Driller Router
- Titanium-Zirconium-Molybdenum Alloy

- Neodyium-Iron-Boron Magentic Material
- Molybdenum Filament
- (OFA) NdYAG Laser
- Fiber Optic Preform Test Equipment
- 6-Axis NC Robot (PUMA)
- Television Receive-Only Earth Stations
- Technical Data: Tape Drives
- Technical Data: Disk Drives
- Industrial Process Control Software Module
- Lead Glass
- Methyl Methacrylate (Acrylic Sheets)
- Air Cushion Vehicles
- Liquid Scintillation Counters
- Centrifuges
- High-Pressure Liquid Chromotagraphy Equipment.

As exporters learn of the foreign availability program, the frequency of requests is growing. For example, in the month of April 1987 alone, six requests for a foreign availability determination were made.

In addition, in 1986 about 950 export license applications asserted claims of foreign availability in the West-West trade context. Thousands of other export license applications claimed foreign availability, but did not attach or submit any data on foreign competition.

TAC Submissions:

During the same period, there were five specific foreign availability requests made by the Technical Advisory Committees (TACs) under Section 5(h)(6) of the EAA. Certifications were received from the following TACs and for the following items:

- Automated Machinery Equipment Technical Advisory Committee (AMETAC) - Jig Grinders;
- Semiconductor Technical Advisory Committee (STAC) - Automatic Wafering Saws;
- Computer Peripherals Technical Advisory Committee (CPTAC) - Floppy Disks;
- Electronic Instrumentation Technical Advisory Committee (EITAC) - Fourier Transform Nuclear Magnetic Resonance Spectrometers; and
- Telecommunications Technical Advisory Committee (TETAC) - Digital Stored Program Controlled Central Office Circuit Switching System.

QUESTION:

Under the COCOM agreement certain exports can take place only with the concurrence of all of the COCOM members. Would you please list for the Committee all of the cases of which your Department is aware of exports made from the territory of COCOM countries since 1980 of items subject to COCOM controls that were diverted to unauthorized destinations that occurred without U.S. concurrence, where such concurrence is required under the COCOM procedures?

ANSWER:

COCOM approval requirements apply only to exports to proscribed destinations (the Soviet Bloc and the PRC). The question addresses the issue of whether a COCOM country has approved an exportation of COCOM-controlled goods to a proscribed destination without full COCOM approval. We are not aware of any such cases. While occasional differences arise among COCOM governments in the interpretation of individual COCOM Control List entries, COCOM utilizes the formal "Definitional Series" procedure to resolve any such differences.

QUESTION:

A major Japanese and a major Norwegian firm are reported to have transferred sensitive goods and technology to the Soviet Union that will significantly improve Soviet submarine capabilities. Would you give us your Department's analysis of the security consequences of this transfer?

ANSWER:

We are aware of the much publicized matter involving Japan and Norway. Despite the disclosures in the case, the facts are still classified and, for the most part, originate with agencies other than Commerce. We are very concerned about the implications of this situation. Commerce is working with other agencies and the Japanese and Norwegians to resolve the problem. While I cannot discuss this case publicly, I, or a member of my staff, would be happy to brief the Committee or its individual members privately on this matter.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GARN FROM RICHARD PERLE

Q1. I believe it is unfortunate that vital national security issues have become hostage to a trade competitiveness debate. In your view, are proposed reforms of the export control system primarily matters of trade competitiveness? Have national security concerns been fully reflected in these proposals?

A1. We must never allow vital national security issues to be held hostage in a trade competitiveness debate. The President's proposals will assure that changes to the export control system will not jeopardize vital technologies on which we depend for our security.

As part of his Competitiveness Initiative, the President has directed the Cabinet to review our export control program to provide recommendations to preserve and enhance the Western technological lead and military capabilities, while minimizing constraints on our economic vitality. Our proposals will permit American exporters to move more quickly to take advantage of market opportunities and provide greater uniformity in the implementation of controls between us and our allies. In general, you will see tighter controls on a shorter list of products. The Defense Department will continue to play a key role in reviewing cases where very sensitive technologies or high risk destinations are involved.

In contrast, some legislative proposals by certain members of Congress have been less than responsible in their treatment of national security concerns. They have failed to recognize that export controls have, at most, a minor impact on competitiveness, would drastically reduce the Defense Department's role in export controls, apparently forgetting that the controls exist to protect our national security. Congressman Bonker has proposed a "meat-ax" approach to product decontrol which would eliminate 40 percent of the items on the list virtually without regard for their potential military applications.

The Administration's approach on this issue avoids the pitfalls you so rightly identify.

Q2. Commerce indicates that a number of policy changes--AEN decontrol, easing reexport controls--are being implemented administratively. You expressed your concern with changes in reexport control policy at the hearing. What is your view on the AEN decontrol issue?

A2. Any initiative designed to streamline current export control procedures must be based on a clear understanding of the costs and benefits to ensue. That applies with full force to any efforts to relax trade restrictions by eliminating Administrative Exception Notes (AEN). At a minimum, I believe that the wholesale abolition of AENs would not serve the purpose of safeguarding strategic concerns while promoting increased competitiveness. This is because AENs often represent considerably more than the least sensitive levels of technology. Indeed, certain Notes were inserted into the Commodity Control List to permit release, under specific and justifiable circumstances, of commodities which would otherwise not be eligible for export to proscribed destinations. Therefore, the criticality of individual AENs and the impact which their removal would have on the exportability of other controlled commodities would require close scrutiny before judgment were made as to suitability for decontrol.

Q3. Parts of the Administration's legislative program--such as foreign availability procedures--could be handled administratively as well. Why do you believe it is important to amend the law as opposed to establishing procedures through Executive Order? What will be the practical effect of this change?

A3. The purpose of change, whether through Executive Order or amendment of the Export Administration Act, is to ensure an effective export control mechanism that is sensitive to competitive pressures without abandoning security concerns. The desirability of amending the law to achieve this objective is an issue best addressed by Commerce Department representatives, who have the principal responsibility for implementing export regulations.

Q4. By my reading, the NAS study is long on proposals for change but short on hard cost/benefit analysis. It is a "blank check" for change. How useful do you find the study to the present debate?

A4. I agree that the NAS study is long on proposals for change but short on hard cost/benefit analysis. This limits the study's usefulness in the present debate.

I agree fully with a number of recommendations made by the panel. Indeed, several of these recommendations coincide with initiatives taken by the Reagan Administration and the Defense Department. These include urging that the United States take the lead in further strengthening the COCOM mechanism, negotiating comprehensive understandings with third countries, and strengthening the role of defense ministries in export control decisions by COCOM member countries.

On the other hand, certain recommendations, although well meant, are not practical or useful. For example, the study recommends a significant reduction in U.S. export and reexport controls and much greater reliance on allied and other friendly governments to stop diversions and guard U.S. technology abroad. Of course, we and our allies are moving in that direction but the judgment is one of timing. Many U.S. allies and trading partners lack the legislation, criminal penalties and trained personnel to counteract the increasingly sophisticated worldwide Soviet efforts to divert U.S. technology. The Academy team's own trips to Europe and Asia show that various COCOM and other friendly governments have great difficulty in preventing diversions. I believe that there is a conflict between the panel's findings that the allies have difficulty preventing diversions and the panel's recommendation that we rely increasingly on our allies' ability to enforce trade controls. If we move too rapidly toward reducing the U.S. role in international export control system, we risk undermining the entire system. This could lead to a loss of Western technology on the scale of the 1970s, with very large subsequent costs to reestablish the Western defense position.

The NAS study also avoids cost/benefit analysis in its judgment of the "balance" between national security and economic competitiveness. The study does not discuss the substantial accomplishments of the Administration in stopping the loss of technology to the Soviet bloc. One measure of our success is that COCOM has not licensed a single new turnkey factory to the Soviet Union in the past five years. Moreover, we are now regaining the lead-time in key military-related technologies that we were losing in the late 1970s and early 1980s before our program took effect. By omitting these and other signs of success, the Academy study avoids the question of what costs we might pay in national security if we took a hasty and ill thought-out approach to reforming the present system of export controls.

RESPONSE TO WRITTEN QUESTIONMS OF SENATOR HEINZ FROM RICHARD PERLE

Q1. Have you had problems with companies in other COCOM countries complying with COCOM regulations? Can you indicate specific countries or companies?

A1. Yes, we have had problems, and the problems are growing worse. While we would not want mention specific countries, or companies, it is fair to say that domestic laws in a number of COCOM countries are lenient and impose minimal penalties against violators. In addition, other member countries conduct few, if any, pre-license or post-delivery end-use verification checks of exported COCOM-controlled equipment, in spite of COCOM stipulations that they do so. Consequently, commodities can be and are routed through a number of front companies in a variety of Free World countries to mask diversion to Warsaw Pact countries. Indeed, this is occurring at an increasing rate.

COCOM rules include no penalty provisions since the organization is based on a gentleman's agreement and reaches decisions by consensus. Although the U.S. Government last January proposed a strengthening of enforcement by COCOM members, we anticipate difficulties in getting major violators to make rapid progress. Increasingly, the commodities involved in questionable transactions are indigenously produced, as opposed to being of U.S. origin or containing U.S. parts and components. This development makes it increasingly difficult for the United States to press other countries to prosecute violators. However, the nature of the controlled commodities being diverted poses a major risk to national security interests. Often, authorities in leak-prone countries do not investigate with adequate thoroughness, thereby adding to the enforcement problem. At the same time, these prospects for diversion give unfair trade advantages to their companies at the expense of U.S. firms.

The problem is compounded by the increasing numbers of diversions occurring in non-COCOM countries elsewhere in the Free World. Firms in these countries are used as a conduit to divert COCOM-controlled commodities to Soviet bloc nations. This activity end-runs COCOM and its intent. Efforts to halt this type of transaction have not had marked success. In addition, we are witnessing the growth of joint ventures between West European companies with Warsaw Pact countries. While the United States treats such joint ventures as Warsaw Pact entities for purposes of reviewing expert applications, some COCOM members do not. That means these joint ventures are thereby free to obtain U.S.-controlled commodities purchased by companies overseas, particularly through U.S. distribution licensing arrangements, with no requirement to report such transactions to the U.S. Government. Consequently, we lose the audit trail of these controlled commodities.

Q2. How have you tried to deal with these problems?

A2. In each case, the U.S. Government has filed formal demarches with the governments involved. The information provided in each demarche is sufficiently detailed for investigators in those countries to begin their probe.

In one case, the information was very detailed. In fact, we found out that the company in this particular COCOM country had received a tip from licensing officials of an inspection of its premises for production equipment about to be diverted to the Soviet Union. The equipment was removed hours prior to the inspection.

In a recent case involving another COCOM country, DoD discovered that a firm had exported sensitive technology and equipment to the Soviet Union. The sales were in violation of COCOM regulations. Because the goods were indigenously produced, however, there was little direct action the U.S. Government could take. In August 1986 the State Department made its first demarche. The response was that there was no violation. DoD continued to obtain information and pressed the matter at the interagency level and with other governments, with little satisfaction. Given the criticality of the commodities involved and the fact that the foreign company continued to provide support for the equipment, DoD continued to urge action and the matter has been elevated to the highest levels of all the governments concerned.

Q3. Have you used the provision contained in the 1985 Act that would permit the imposition of import controls against offending countries?

A3. No.

Q4. Why not?

A4. You will have to ask the Commerce Department that question. We have been too timid in my view.

Q5. Are there other "negative incentives" we might develop to encourage COCOM discipline?

A5. Yes. A major "negative incentive" would be to allow for U.S. Government action initiated in cases of diversion of multilaterally-controlled equipment and not just equipment of U.S. origin. Another "negative incentive" would be mandatory restitution by companies or countries in exchange for continued import privileges.

Q6. How about restrictions on the federal government doing business with those companies? Denying them access to federal contracts, for example.

A6. This is an approach already available to the U.S. Government through the Federal Acquisition Regulations. The problem arises when the company involved is not doing business with the U.S. Government. To enable action in such cases, statutory authority could be expanded to include a ban on U.S. defense contractors doing business with foreign companies found to be in violation of COCOM rules.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GRAMM FROM RICHARD PERLE

Q1. Would you analyze for the Committee the provisions of S.652 in terms of their impact on our national security? To the extent that any provision of that bill would make it more likely that goods or services that would make a significant contribution to the military potential of any controlled country will find their way to a controlled country, would you estimate the cost of such diversion in terms of the defense measures that would be needed to compensate for that loss?

A1. Thank you for this opportunity to comment on S.652. I have serious concerns with many sections of the bill but wish to highlight my fears concerning several specific provisions.

Section 6 would eliminate the requirement for U.S. firms to obtain validated licenses for exports to any non-controlled country of goods that can be shipped to a controlled country if other COCOM members are notified. This is an extremely dangerous proposal. It adopts an entirely inappropriate yardstick--the system of "Administrative Exception Notification" applicable only to civil end-users and civil end-uses--and sets up arbitrary decontrol not just to the Free World but to a vast range of destinations. We cannot afford to rely on foreign policy export controls to forestall dangerous export diversions with adverse consequences for our national security. The retention of licensing requirements is absolutely crucial if we want to prevent unhampered shipments of sophisticated technology, such as precision bearings and numerically controlled machine tools, to a country such as Iran or Libya.

Section 5 would eliminate the requirement that firms located abroad receive authorization from the U.S. Government before they reexport militarily critical American products to a country that cooperates with us on export controls. This would severely handicap our efforts to detect diversions and accumulate evidence to prosecute high technology smugglers. You should know that U.S. subsidiaries abroad, especially in Western Europe, are the primary targets of Soviet-led techno-bandits. This proposal is not only ill-advised, it would hand the Soviets a major intelligence victory.

The Defense Department also opposes the proposed changes in Section 8 which would eliminate all unilateral controls. Among the list of items subject to unilateral control are bacteria, viruses, and funguses. Do we really want to decontrol biological warfare items? Also, do we want a blanket decontrol of categories like aerial cameras and film, or underwater cameras?

Finally, the changes proposed by Section 12 would establish unrealistically short deadlines for Presidential national security determinations in cases where the Departments of Defense and Commerce have conflicting recommendations. It is also inappropriate to provide one executive agency a kind of "pocket veto" authority, as this provision would do for the Commerce Department.

Concerning your question about the potential costs of diversions to controlled countries, we continue to stand by the conclusions of Secretary Weinberger's report to the 99th Congress on Defense's technology security program. In that report, savings in defense expenditures by the U.S. and our allies are estimated at $5 to $13.2 billion over the 1985-1995 time period.

Q2. The vast majority of export license applications for exports to Free World destinations are approved. If this is the case, what benefits to our national security are derived by the licensing process? Is there more to the process than just the question of whether or not a license is approved? How often are licenses approved subject to specific conditions, and what types of conditions are usually required?

A2. A number of benefits to national security are derived by review of Free World license applications. Clearly, as we have tightened our export controls on exports to our adversaries, they have attempted to divert goods and technology through Free World destinations. A number of highly publicized cases in recent years attest to the efficacy of our review process and enforcement capabilities. Additionally, review of cases to other than Bloc destinations has prevented harmful exports to terrorist-supporting nations and groups.

Concerning how often licenses are approved with conditions and what the conditions are, I cannot speak for the entire licensing process. However, as far as the Defense Department's review of Free World license applications is concerned, these are the figures. We have reviewed approximately 32,000 applications since we began West-West review a little over two years ago. That represents approximately 10 percent of the number reviewed by Commerce. We have recommended specific conditions on approximately 7,000, or a little over 20 percent, of the applications we have reviewed. We have recommended denial of 1,300, or approximately 3 percent. The conditions have generally dealt with resales and reexport restrictions. And, I would caution that we are looking at the more sensitive exports to the more sensitive locations. I would assume that the percentage of all cases having specific conditions applied would be less.

Q3. To what extent does the existence of a validated export license for an item exported from the United States increase the likelihood that COCOM countries will follow procedures with regard to that item to ensure that it is not reexported to an unauthorized recipient? Would the removal of U.S. licensing requirements make the implementation of such procedures by COCOM countries less likely?

A3. Let me emphasize that under current regulations, validated licenses are not required for the vast majority of transactions to COCOM nations. Current legislation also extends such treatment to other nations which participate in agreements providing COCOM-like assurances. What concerns us are reexports of certain high tech items to third countries. Validated licenses provide an audit trail, accountability, and legal liability for these items. Because of such an audit trail, and, I might add, with the full cooperation of our COCOM allies, we have been able to track down, halt, and prosecute a number of attempted diversions. We believe that the requirement for validated licenses provides a critical enforcement vehicle and keeps our allies focused on the magnitude of the diversion problem.

Q4. A major Japanese company and a major Norwegian company are reported to have transferred sensitive equipment and technology to the Soviet Union that will enhance the ability of the Soviet Union to produce far quieter ship propellers. What application will this transfer have on Soviet submarine capabilities? What consequences can this transfer have for the strategic balance? What estimates can you give on the cost of devising and implementing measures to compensate for this transfer.

What action has been or is being taken against these companies by their governments? What action is the Defense Department taking? Are these companies still eligible to apply for U.S. defense contracts?

A4. The Secretary of Defense is currently reviewing a study that attempts to estimate costs and consequences of this transfer. As of yet there are no official estimates.

Q5. Which interagency group is tasked with the formulation of Administration policy options for the President with regard to export controls and economic security questions? Is it the National Security Council or is it the Economic Policy Council? What is the nature of Defense Department representation on the Economic Policy Council? Is Defense a full member of that Council?

A5. Export controls for national security purposes fall within the purview of the National Security Council, as do all other national security matters, and are subject to the same kind of tasking, analysis and discussion within the National Security Council that other policy issues relevant to the national security--broadly defined--do.

The Economic Policy Council has not generally dealt with export controls but does consider matters relevant to the Department of Defense. The Defense Department, therefore, is invited to participate in meetings of that group and is usually represented by Deputy Secretary Taft but is not a full member.

Where international economic policy matters are seen as relevant to national security there is coordination at senior levels to permit discussions and the development of the best policy options, frequently through the convoking of an ad hoc policy group similar to the formal NSC decision-making process.

Q6. The test of any export control policy should be whether our national security will be enhanced or harmed by the proposal. If we decrease or eliminate the role of the Defense Department in national security licensing decisions, where are we going to go to ensure that license applications are being examined from the perspective of national security?

A6. The role of the Defense Department is critical to export control policy for national security reasons. No other USG department or agency has either the mandate or the expertise to ensure that adequate attention is given to defense concerns in the licensing process, and there can be no governmental mechanism to permit the expression of views of the defense community without full participation of DoD.

Q7. To what degree does our export control system reduce our defense needs and therefore our defense costs? What is your estimate of the cost to our defense of actual acquisitions by the Soviet bloc to sensitive Western goods and technology?

A7. Estimates of costs foregone, savings made or hypothetical costs which could have resulted from unimpeded flows of technology are, necessarily, both difficult to calculate and of doubtful worth. Rarely is there a clear-cut "challenge-response" situation; and the great number of variables, including time lags in budgets, R&D and deployment, make estimate of actual and hypothetical savings less than adequate.

Nonetheless, despite such problems, some calculations can be made, allowing for the inevitable uncertainties about Soviet use of Western technology. According to the Department of Defense Report to the 99th Congress, Second Session on "The Technology Security Program" (1986), savings denied the Soviets were estimated at between $4.6 and $12.0 billion based on applications made during the period April 1984 through December 1985. To counter the losses prevented would have necessitated additional U.S. defense expenditures estimated between $5.0 and $13.2 billion over a 10-year time period.

Q8. Acquisition of certain technologies by Iran or Libya could pose significant security risks to United States naval and other forces operating in areas crucial to our national security. These countries can be expected to employ such technology if they possessed it. Why, then, are Iran and Libya not listed as controlled countries pursuant to section 5 of the EAA?

A8. I am glad that you asked me this question. As you know, the list of so-called controlled countries has its genesis in section 620(f) of the Foreign Assistance Act. As you are also aware, section 5 of the EAA also notes that the list of controlled countries may be changed, as concerns export controls, as the President may direct. In making such a determination, the country's communist or non-communist orientation is only one of a number of factors to be considered. Clearly, a country's relationship and potential threat to U.S. national security should be a paramount consideration. The Department of Defense has a long time record of urging stronger controls on these states. We would welcome their inclusion on the controlled list. Perhaps your question as to why they are not on such a list should be more appropriately addressed to the other executive departments.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GRAMM FROM
JOHN E. POMEROY

Universal
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April 22, 1987

The Honorable William Proxmire
Committee on Banking, Housing, and Urban Affairs
539 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Proxmire:

Thank you for sending me the two questions of Senator Phil Gramm regarding export controls. I am happy to answer them.

> 1. Several individuals have asserted that the national security control list is too long, but they only mention general categories when asked what they would have removed from the list. Such general categories are of little help to us in drafting legislation in this sensitive and complex area. Do you believe that the national security export control list is too long? If so, would you please provide for the Committee a list of the specific items that you believe should be eliminated from the control list?

In response to the first question, I believe the control list is too long. The Secretary of Commerce has stated publicly that 40 percent of the items now controlled should be decontrolled due to foreign availability or because adequate control is simply not feasible for certain products. The view that the control list is too long is also shared by the panel that wrote the recent report on export controls under the auspices of the National Academy of Sciences. I call your attention to the panels' recommendations on Page 170 and 171 of the NAS report.

In addition, it is my understanding that the Commerce Department, in cooperation with the technical advisory committees, has developed an internal list of items that could be decontrolled with no adverse impact on national security. I suggest the committee inquire about this list.

The American Electronics Association is presently soliciting its member companies for foreign availability information regarding electronic assemblies and electronic computing equipment. I have attached a preliminary list representing a small sample of items and specifications for which AEA believes foreign availability exists. This list and the parameters may be adjusted before it is submitted to the Commerce Department as the types of items for which foreign availability exists is constantly changing due to the rapid advances in technology in the world marketplace.

2. Would you provide for the Committee a list of the specific formal requests that your company, your trade association, or other members of your trade association have made since July 1985 to the Department of Commerce for findings of foreign availability with regard to national security export controls? Which of these were submitted in 1986? Which were submitted in 1987?

In response to question two, my firm has not submitted a foreign availability allegation to the Commerce Department, and I understand that about 20 allegations have been received by Commerce from industry since 1985. The American Electronics Association does not keep a count of foreign availability submissions by its member companies, but I have asked AEA to compile the information and submit it directly to you.

Frankly, the reason why more foreign availability submissions have not been made is that it was not clear until very recently that the U.S. government could actually implement the foreign availability provisions in the Export Administration Act as amended in 1985. I call your attention to the attachments I have submitted in response to the Senator Garn's questions regarding the case of silicon wafer saws, which took over three years to resolve. In addition to this case, I am also aware that the Electronics Instrumentation Technical Advisory Committee made a foreign availability certification on February 26, 1986 regarding spectrometers. Fourteen months later, this issue still awaits a final U.S. government determination.

The length of time and great expense incurred by the companies involved in these cases has had a chilling effect on the interest of the electronics industry to make foreign availability submissions and press for their consideration within government. One reason why foreign availability submissions take so long to process is that there are not specific standards by which to judge the criterion of "comparable quality" specified in the EAA. In my view, "comparable quality" exists whenever a foreign product may be substituted for a U.S. product in the marketplace. The Senate would make a meaningful contribution to the foreign availability process by making such a clarification in the EAA.

I hope you have found my comments responsive to the questions. Please let me know if there is any other information that I can supply the committee.

Sincerely,

John E. Pomeroy
President

JEP:sah
Attachment

Digital computers or related equipment that do not exceed any of the following limits:

(1) Central processing unit - "main storage" combinations, either

(i) "Total processing data rate" - 155 Mbit per second and "total connected capacity" of "main storage" - 72 Mbit; or

(ii) "Total processing data rate" - 100 Mbits per second and "total connected capacity" of "main storage" - 134.5 Mbit;

(2) Input/output control unit - drum or disk drive combinations:

(i) "Total bit transfer rate" - 101 Mbit/sec;

(ii) "Maximum bit transfer rate" of any drum or disk drive - 34 Mbit/sec;

(iii) Total connected "net capacity" - 74,000 Mbit;

(3) Array transform processors:

(i) "Equivalent multiply rate" - 800,000/sec;

(ii) Fast Fourier Transform of 1,024 complex points - 40 ms;

(iii) Word length - 38 bit;

(4) Image enhancement capability and having an "equivalent multiply rate" of more than 2 million operations per second;

(5) Cathode ray tube (CRT) graphic displays that do not exceed any of the following parameters:

(i) 1,024 resolvable elements along one axis and 1,280 resolvable elements along the perpendicular axis;

(ii) 11.8 million bit of refresh storage; or

(iii) 256 shades of gray or color (8 bits per pixel);

(6) Plotting equipment and digitizing equipment that has an accuracy of 0.002% or worse and an active area of 254 cm x 254 cm or smaller.

Electronic component assemblies, sub-assemblies, printed circuit boards and microcircuits not specially designed to military standards for radiation hardening and temperature, as follows:

(a) Substrates for printed circuits;

(b) integrated circuits, microprocessors, and microcomputers (bipolar or CMOS-type) with 28 or fewer terminals

(c) microprocessors with an operand length of 16 bit or less and an arithmetic logic unit (ALU) not wider than 32, except:

(1) Those with a total processing data rate exceeding 28 Mbits per second;

(2) Bit-slice microprocessors;

(d) Silicon-based memory devices, as follows:

(1) MOS DRAMs with no more than 64 Kbits;

(2) MOS SRAMs with no more than 16 Kbits;

(3) Mask programmed ROMs with no more than 64 Kbits;

(4) UV-EPROMs with no more than 64 Kbits;

(5) EAROMs with no more than 32 Kbits;

(6) EEROMs with no more than 64 Kbits;

Note: 1 Kbit = 1,024 bits.

(e) Operational amplifier microcircuits that do not have a slew rate greater than 100 volts per microsecond;

(f) Analog-to-digital and digital-to-analog converter microcircuits, except:

(1) Analog-to-digital converter microcircuits with less than a 500 ns settling time for voltage output and a maximum resolution of 8 bit;

(2) Digital-to-analog converter microcircuits with less than 500 ns settling time for voltage output and a maximum resolution of 8 bit;

(3) Digital-to-analog converter microcircuits with less than 25 ns settling time for current output and a maximum resolution of 8 bit;

(g) Silicon-based 8-bit or less user-programmable single chip microcomputers;

(h) Integrated optical microcircuits with no more than 2048 elements;

(i) Non-reprogrammable silicon-based microcircuits specially designed or programmed by the manufacturer for business or office use.

The Armstrong amendment directs the Treasury secretary to prohibit the importation of a number of Soviet-produced goods on the grounds they may be produced by forced or convict labor, thus violating trade law. The products to be prohibited by the measure include gold ore, agricultural machinery, tractor generators, tea, and petroleum products.

During discussion prior to the amendment's passage, Armstrong defended the necessity of the restrictions to the panel. "I don't think it's a revenue measure," he said in response to a question. "Actually, the amount of international competition is inconsequential. I'm taking this up because it's the law. It's a human rights issue. I can't understand why the Administration has been so loath to enforce this," he added.

Other members of the committee expressed doubt, however. "This issue can and will cause problems with negotiations" between the United States. and the Soviet Union, Baucus said. "The Soviet Union is now buying corn, and is about to start buying wheat from us again. I don't know if it is wise to jump into this now," he cautioned.

In other action, several committee members offered free-standing trade resolutions at the markup, two concerning U.S.-Canadian agricultural trade, and one regarding the trade of oil fats between the United States and the European Community.

Conflict arose between U.S.-Canada trade resolutions proposed by Sens. Dave Durenberger (D-Minn) (SConRes 27) and Daniel Moynihan (D-NY) (SRes 50). While the Durenberger resolution would direct the USTR to study the effects of U.S. grain markets (especially corn) on the Canadian market, the Moynihan resolution would recommend an expedited trade agreement between the United States and Canada.

Both resolutions come on the heels of the decision by the Canadian Import Tribunal March 6 that U.S. corn were damaging the Canadian industry. "I am surprised and disappointed by the Canadian action," Moynihan said, adding that the United States "has more trade with the province of Ontario than it does with all of Japan—they are the most important country in the world to us," he said.

Taken together, the resolutions could send "the wrong signals" to the Canadians, according to Sen. John Danforth (R-Mo). "I strongly support the Durenberger resolution," he said, adding that he thought the two together could be very harmful to U.S.-Canadian relations.

"I don't see what's so radical about it," said ranking minority member Bob Packwood (R-Ore), referring to the Moynihan amendment. "All it does is ask for an expedited agreement."

Also offered was a Danforth resolution (SConRes 21) concerning trade of oil fats with the European Community, but due to a loss of quorum during the markup, Bentsen deferred further consideration of the resolutions until March 18.

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TRADE POLICY: U.S. EXECUTIVE ANGRY AND FRUSTRATED OVER DELAYS IN FOREIGN AVAILABILITY DECONTROL

A U.S. executive who has been trying to get his product decontrolled for export because of foreign availability March 11 told a House subcommittee he was angry and frustrated because of delays in the Reagan Administration's export decontrol process.

Assistant Commerce Secretary for Trade Administration Paul Freedenberg told the Foreign Affairs Subcommittee on International Economic Policy and Trade the department was hoping to publish decontrol regulations effective March 17.

COCOM agreed to decontrol silicon slicing equipment for East Bloc destinations Dec. 9, although that decision has not yet been implemented in regulations.

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George S. Kachajian, chairman of the Silicon Technology Corp., manufacturer of the equipment, said that after his Oct. 7 congressional testimony he had been ''guardedly optimistic'' about decontrol.

Now, he told the panel, he is ''angry, frustrated, and deeply concerned about the prospects of America's future as one of the most clear-cut cases for decontrol under the law is still unresolved.''

In his prepared statement, Kachajian recounted statements by Freedenberg in October that the decontrol would be complete by the beginning of this month; and by Robert W. Dean, then at the State Department and now with the National Security Council, that State had taken steps to assure foreign availability findings are handled quickly.

Although tentative approval was granted Dec. 9, Kachajian told the panel, the minutes of the meeting were not transcribed into English until Jan. 12 and the French translation was not complete until four days later.

In addition, he outlined advice he has gotten from Administration controls officials since October: on Dec. 10 he said Freedenberg estimated decontrol in 30 workdays, definitely by Feb. 3; Dean contacted Kachajian's representative in the House, Rep. Marge Roukema (R-NJ), and estimated decontrol by Feb. 6; and the Office of Foreign Availability estimated decontrol on April 16 in a letter to Kachajian, although the office later moved the date back to March 16.

''What all this tells me is that COCOM's administrative procedures—assuming they don't make them up as they go along—are not known to those government officials legally charged with coordinating U.S. participation in this body,'' Kachajian told the subcommittee.

According to Kachajian, since the July publication of the final determination of foreign availability, his firm has lost $540,000 in business because of government actions.

He told the panel that in June two Polish engineers tried to get visas to visit his plant before considering purchase of six automatic sawing machines, but that State denied the applications, citing U.S. export laws.

''Under State's novel view, the Polish engineers were not authorized to even look at STC machines and thus had no lawful purpose for their visit. Our Swiss competitors, unhampered by the assistance of the U.S. State Department, extended their hospitality to the Poles and were able to book the order,'' Kachajian told the hearing.

Kachajian was critical in his statement of Defense, which has come under a lot of fire in this case, with the executive calling it an ''outrage . . . that an arm of our own government, the DTSA in the Pentagon, waving the flag of national security, has for the past six full years been a major contributor to the devastation of America's manufacturing capability, our international competitiveness, and the loss of our technological leadership.''

''Might I suggest to the powers in the Pentagon that they can strike a mighty blow in favor of our national security and economic health by walking across the corridor and shutting down [Deputy Undersecretary for Trade and Security Policy] Dr. [Stephen] Bryen's 'licensing' shop. We will also save an annual budget of $130 million wasted by this office. The roar of approval from U.S. manufacturers will reverberate throughout Washington,'' Kachajian said.

Freedenberg, who testified before Kachajian March 11, said the period following COCOM agreement for member governments' questions or objections on draft decontrol expires March 16.

''If we can confirm that there were no such questions/objections, we are hoping to publish our West-East decontrol regulations effective the following day,'' he said.

Subcommittee Chairman Don Bonker (D-Wash), who has promised tu buy Freedenberg a steak dinner if the Administration decontrols anything on foreign availability grounds, asked

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Kachajian if he believed Freedenberg, to which the executive replied, "Not until I have it in writing."

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TRADE POLICY: EUROPEAN OFFICIAL SENDS LETTER OF CONCERN ON TEXTILE BILL TO USTR, THREATENS RETALIATION IF APPROVED

BRUSSELS—(By a BNA Special Correspondent)—European Community Trade Commissioner Willy de Clercq sent a letter March 11 to U.S. Trade Representative Clayton Yeutter "expressing his concern" about the proposed "Textile and Apparel Trade Act of 1987" which was introduced Feb. 19 in both houses of Congress.

If adopted, the legislation (HR 1154, S 549) would introduce a global quota for all U.S. imports of textiles and apparel, including EC products (Report No. 33, L-3). The limits on imports would be in effect for an unlimited period, during which time a maximum annual growth rate of 1 percent would be allowed. At the end of ten years, Congress would review the legislation.

De Clercq stressed that the proposed law "would fundamentally change the way in which international textile trade was conducted and would jeopardize the recently negotiated extension of the Multi-Fiber Arrangement." It would also, he added, "have a profound negative effect on the international trading system and in particular on the work under way in the Uruguay Round" of the General Agreement on Tariffs and Trade.

As a result, the EC official warned that "the European Community would be forced to adapt its textile policies to avoid a diversion of trade from the U.S. and to introduce retaliatory measures against American goods."

In the letter, de Clercq also reminded Yeutter that in 1986, EC imports of American textile products grew by 45 percent over 1985. Although President Reagan vetoed a similar textiles bill drafted during the last Congress, U.S. officials pointed out that the new Democratic-controlled Congress could override the veto.

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TRADE POLICY: WAYS-MEANS COMMITTEE LEADERS' CHANGES IN OMNIBUS TRADE BILL HITTING SNAGS IN TRADE SUBCOMMITTEE

The House Ways and Means Trade Subcommittee March 11 continued consideration of a massive House trade bill (HR 3) amid indications there may be battles over some of the revisions proposed the previous day by Committee Chairman Dan Rostenkowski (D-Ill) and Trade Subcommittee Chairman Sam Gibbons (D-Fla).

The subcommittee took up a few amendments during a closed door session late March 11 and hoped today to complete action on the remaining changes proposed by the two leaders (Report No. 46, L-7, and SpSupp). The subcommittee is then expected to adopt the new package as an amendment in the form of a substitute for the language in HR 3. The legislation, as amended, then goes to the full Ways and Means Committee, which is hoping to report the bill by the end of March.

Two issues that could prove contentious during the subcommittee markup are those dealing with private lawsuits to seek damages for injury from foreign dumping, and to take action against countries that have large trade surpluses with the United States and are guilty of unfair trade practices. The private remedy proposal, sponsored by Rep. Frank Guarini (D-NJ), and the trade surplus provision, sponsored by Rep. Richard Gephardt (D-Mo), are two of the most controversial measures in the original version of the bill and are being pushed heavily by labor and industry groups.

In addition, the subcommittee also has not yet taken up amendments dealing with such matters as changes in the dumping and countervailing duty laws, telecommunications trade, presidential trade negotiating authority, and changes in Section 301 of the Trade Act of 1974.

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Export Control Laws Castigated by New Jersey Businessman

A New Jersey manufacturer of high tech equipment has told a Congressional Committee that the government's interpretation of export control laws has brought his own company to the edge of bankruptcy and—if continued—will lead to "the rapid deindustrialization of America." His company manufactures I.D. saws, a single-axis machine tool that slices hard materials such as silicon into wafers: wafers that set the semiconductor manufacturing process in motion. The entrepreneur, George S. Kachajian, was able to bring his story to the trade sub-committee of the House Foreign Affairs Committee because of strong support he has received from members of the New Jersey delegation of Congress. His own representative, Congresswoman Marge Roukema, appeared to help plead his case to the subcommittee.

Kachajian's company, Silicon Technology Corporation, had developed a lively trade with foreign markets, particularly Eastern Bloc countries, before 1980, at which time export controls were imposed in the wake of the Russian invasion of Afghanistan. In the next two years, a major competitor in Switzerland took over the foreign market and penetrated the U.S. market as well by "dumping" I.D. saws, Kachajian charged, at bargain basement prices. For over five years he has sought—unsuccessfully—to be allowed to export the saws because of their availability through the Swiss company, i.e. because of the foreign availability of the I.D. saws.

He testified to a nightmarish series of meetings, of telephone calls and visits to Washington, to get permission to export the product. In July 1986, after two and a half years of research and inter-agency review, the Department of Commerce issued a certificate of foreign availability, but the license has not been granted because of problems with COCOM countries.

Government representatives responded cautiously to Kachajian's charges. The Commerce Department witness conceded that the foreign availability provision is not working as well as advocates had hoped. And the DOD witness noted that national security considerations, some of them classified, were a factor in the export of I.D saws. Sen. Bill Bradley (D-NJ) characterized the company's problems in these words:

> Mr. President, I agree that any decision to partially or completely decontrol a restricted item must take into account the effects this action may have on our national security. However, I question whether the DOC is effectively carrying out the foreign availability assessment procedures. I believe the prolonged delay in obtaining a final foreign availability assessment was doe to the DOC's exhaustive consultations with the Department of Defense. In fact, the DOD's opposition resulted in STC's request being reviewed by the National Security Council. What is significant is that this delay occurred after the Commerce Department found substantial evidence that the product was available from foreign producers.
>
> STC's problems may have been an isolated case. And where serious national security problems will result, no one questions the restrictions on sales. However, when one considers the findings of President Reagan's Committee on Industrial Competitiveness which indicated that export controls results in lost sales of $12 billion annually, STC's case may reflect a more significant problem in the administration and promotion of American exports where national security is not in question. Certainly, by delaying and possibly preventing the export of these goods, we are impairing our ability to trade.

A report just issued by the Joint Economic Committee of Congress reinforces Kachajian's point of view. According to the report the U.S. is losing its ability to compete in high-tech manufacturing and faces a high-tech trade imbalance of over $2 billion in 1986. A high-tech trade surplus of $27 billion in 1980 shrank to $4 billion in 1985 in computer, aircraft and other products classified as high-tech because of their large R&D costs. The report, which was distributed by the Democratic leadership of the Joint Committee, did not discuss the effect of export controls but said a huge surge in imports, especially in electronics, "suggests that U.S. firms may have lost their competitive technological strength."

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GARN FROM
JOHN E. POMEROY

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April 22, 1987

The Honorable William Proxmire
United States Senate
539 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Proxmire:

Thank you for the opportunity to respond to Senator Garn's questions regarding the U.S. export control system. I am pleased to do so.

1. A major concern raised by exporters is that foreign competitors ship goods, including those that our exporters agree should be controlled, when U.S. firms cannot. Improved foreign availability procedures are a partial answer for goods freely and appropriately available in the West. In questionable cases, however, is there a need for better enforcement tools for COCOM rules? Are U.S. sanctions to force foreign control of critical technologies, such as import restrictions on offending firms, an appopriate response? Has U.S. industry pursued use of sanction authority in current law? What additional steps should be considered?

Regarding the first question, there are instances in which our COCOM partners do not interpret COCOM agreements in a manner identical to the U.S. For instance, it is well known in the electronics industry that interpretations of the recent agreement regarding exports to the People's Republic of China vary among COCOM countries to the detriment of U.S. exporters. This is especially a problem for U.S. semiconductor equipment manufacturers which have been denied the right to export products to the PRC while European competitors have exported equally sophisticated items to the PRC.

In these cases, it is difficult to demonstrate that other COCOM member governments deliberately violated COCOM agreements. Instead, it is likely that ambiguities is the original COCOM draft (written in French) and ambiguities created in translating the draft into the languages of the 16 member nations are the source of the problem. Most COCOM rules are subject to interpretations by the member countries, and our COCOM partners typically make more liberal interpretations than the U.S.

When this occurs, I believe U.S. industry does an excellent job of reporting such instances to the U.S. government, especially when differences in interpretations cause U.S. firms to be placed at a competitive disadvantage. The solution is to achieve COCOM clarification as soon as possible so that all COCOM governments make the same licensing decisions on comparable products. Unfortunately, when other COCOM members refuse to adjust their interpretations, the U.S. has not pursued further actions.

Regarding sanctions to enforce COCOM rules, it would seem that a mechanism to enforce COCOM agreements to prevent deliberate violations has some usefulness as part of an effective multilateral control regime. To my knowledge, U.S. industry has not pursued action against foreign offenders since it appears that the Act specifies that these matters be handled by U.S. government diplomatic channels and not U.S. companies. Of course, the U.S. experience with trade sanctions of other types should raise questions about whether sanctions against COCOM would prove meaningful.

In my view, Mr. Chairman, a far greater problem is the uncontrolled availability of increasingly sophisticated goods sold and manufactured in the newly industrialized countries (NICs) that are not party to the COCOM agreements or similar bilateral agreements. In some cases, these countries have the ability to manufacture sophisticated goods on par with the U.S. and our COCOM partners. Unless these countries join COCOM or enter into bilateral agreements with the U.S., the entire COCOM mechanism will soon become obsolete. Section 5(k) of existing law provides the authority for the U.S. to enter into such agreements, although it is not clear to me why other countries would want to curtail their exports unless the U.S. has some benefit to offer as part of the agreement.

2. The NAS study credits Defense with a key role in improving the effectiveness of U.S. export controls, yet calls for removal of Defense from the process, an illogic echoed in the bills before the Committee. On the other hand, I can see merit in an approach, as has been proposed in the area of foreign availability, whereby firm, action-forcing deadlines would be set to ensure that bureaucratic delays in Commerce, DoD or anywhere else do not stand in the way of timely resolution of issues. Would firm foreign availability deadlines make the system work to your satisfaction? GAO reports assessment problems in this area and notes little industry interest in pursuing foreign availability cases. Are there problems here that would not be addressed by firm deadlines?

Regarding the second question, the Senate would make a major contribution in improving the export control system by providing greater clarity in the EAA with respect to the roles of the Department of Commerce and Defense. Interagency wrangling over foreign availability has rendered useless the foreign availability mechanism in the EAA, causing U.S. industry to lose confidence in the ability of our control system to properly function. Page 156 of the recent National Academy of Sciences report describes some of the problems in detail. For your information, I have provided a brief summary of a recent foreign availability case which has had a chilling effect in the electronics industry. If Congress improves the system of making foreign availability determination, I am confident that U.S. industry will respond by actively seeking to aid the U.S. government in gathering and assessing the required foreign commercial data.

Making a foreign availability determination is a commercial, business-type assessment that should be made solely by the Commerce Department, but with input from the private sector and other government agencies. As you know, making a foreign availability determination does not require decontrol. It merely provides official confirmation that an item is available to the East from an uncontrolled source. It is in the U.S. national security interest to identify foreign availability as soon as it occurs so we know what is being made available to the East. After such a decision is made, the EAA requires the U.S. to seek to eliminate the availability through negotiations or decontrol the item in the event that negotiations don't or won't work.

Unfortunately, the Export Administration Act does not have specific standards for making foreign availability determinations beyond "sufficient quality" and "comparable quality". In my view, the standard should be whether a foreign product can be substituted for the U.S. product by the user. Adding such a clarification to the Act would be a real contribution toward improving the process of making foreign availability determinations.

I hope this reply adequately addresses your concerns. Please feel free to contact me if you have additional questions.

Sincerely,

John E. Pomeroy
President

JEP:sah

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GARN FROM 'CALMAN COHEN

1. A major concern raised by exporters is that foreign competitors ship goods, including those that our exporters agree should be controlled, when U.S. firms cannot. Improved foreign availability procedures are a partial answer for goods freely and appropriately available in the West. In questionable cases, however, is there a need for better enforcement tools for COCOM rules? Are U.S. sanctions to force foreign control of critical technologies, such as import restrictions on offending firms, an appopriate response? Has U.S. industry pursued use of sanction authority in current law? What additional steps should be considered?

1. Foreign availability of commodities to Soviet Bloc nations is not a significant issue from the standpoint of preventing U.S. exporters from competing. Trade with the East Bloc represents such a small percentage of total trade that although delays and inequities exist vis-a-vis our trading partners because they are selling certain goods to the East and our exporters cannot, these problems are not of paramount importance to us. We are concerned about availability in the West and the very serious disadvantage this places on U.S. exporters because of delays or outright prohibitions when similar constraints are not placed on our competitors abroad.

The question you asked necessarily relates to foreign availability in the West-East context. In that instance, several thoughts come to mind. First, ~~since COCOM is not~~ a ~~treaty organization~~ it would probably not be consistent with the GATT to impose import sanctions on foreign exporters who ship certain high-tech goods to the East notwithstanding the concern voiced by the U.S. Government. If the availability exists in a non-COCOM country, what law of that country would the company be violating? Unless the U.S. has convinced the country to protect the technology through bilateral negotiations there is no incentive for the company to stop shipping the goods. Besides, we don't believe the problem is so large as to require such attention. The only merit to adopting this proposal is to give the U.S. Government more leverage when negotiating away foreign availability with other countries. That may be reason enough although we seem to already have enough levers judging by the fact we do have some agreements in place.

2. The NAS study credits Defense with a key role in improving the effectiveness of U.S. export controls, yet calls for removal of Defense from the process, an illogic echoed in the bills before the Committee. On the other hand, I can see merit in an approach, as has been proposed in the area of foreign availability, whereby firm, action-forcing deadlines would be set to ensure that bureaucratic delays in Commerce, DoD or anywhere else do not stand in the way of timely resolution of issues. Would firm foreign availability deadlines make the system work to your satisfaction? GAO reports assessment problems in this area and notes little industry interest in pursuing foreign availability cases. Are there problems here that would not be addressed by firm deadlines?

2. Firm foreign availability deadlines would be of some help to the assessment process. However, the process suffers most from a lack of credibility. There have been far too few positive foreign availability findings. Since this requirement was inserted into the Act in 1979, one or two positive findings have been published - hardly an encouraging record. As a result, industry does not believe in the process and has elected not to expend the considerable effort gathering the necessary documentation to support their assertions. The recently concluded celebrated case involving wafering saws is an excellent example of what does or does not occur on foreign availability assessments. Rather than repeat the chronology here, we commend the example to you for your analysis. That case more than any other demonstrates the problems surrounding the current foreign availability program.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GRAMM FROM CALMAN J. COHEN

1. Several individuals have asserted that the national security control list is too long, but they only mention general categories when asked what they would have removed from the list. Such general categories are of little help to us in drafting legislation in this sensitive and complex area. Do you believe that the national security export control list is too long? If so, would you please provide for the Committee a list of the specific items that you believe should be eliminated from the control list?

1. Yes. We believe the national security commodity control list (CCL) is too long. It is too long in two respects: first, some items included on the CCL are not deemed significant from a strategic national security standpoint, and second (and this aspect is of utmost importance to ECAT companies), it is too long in its application to transfers among Free World nations (West-West).

Let me initially examine the second aspect of the CCL issue and its relation to West-West transfers. By design, the export administration system requires that any commodity controlled for national security reasons to the USSR (and Eastern Bloc nations) must also be approved for export to Free World destinations. In many instances this approval must be obtained on a case-by-case basis and is a time consuming process. Notwithstanding the improvements the Administration has made in export license review procedures, the attendant time to obtain necessary documentation from foreign consignees and the license process itself (including preparation at the companies) has discouraged many foreign consignees from purchasing U.S. commodities. Granted many U.S. companies have distribution licenses that do solve some of these problems; however, many small manufacturers without D.L.'s are finding competition abroad difficult. Even the U.S. companies with D.L.'s have felt the impact of the licensing process in the form of lost sales due to foreign manufacturers "designing out" U.S. components because they don't want to hassle with U.S. regulations.

What does this have to do with the length of the CCL? Very simply, a large majority (>98%) of goods shipped from the U.S. are not destined for the USSR, (either legally or illegally) but instead find legitimate applications in the Free World. Yet the U.S. government administers a lengthy and extremely complicated Commodity Control List for all these exports to the West. Therefore all of its compliance resources are spread over the entire gamut of the CCL, thereby diluting the effectiveness of those resources. From an efficiency standpoint it would appear more reasonable to focus those resources on a smaller list of highly critical items with the potential outcome of increasing the effectiveness in thwarting the Soviets' efforts to obtain Western technology.

Some recent rule changes and proposed rule changes are having the effect of improving the situation for exporters vis-a-vis foreign consignees: to wit, the new Parts and Components regulations. As helpful as these changes are, they do not address the fundamental issue of the practical problem of enforcing export controls over such a large universe of commodities, especially West-West.

Now let me return to the first aspect of the CCL length I mentioned: i.e., the more technical issue of whether all the goods listed therein truly meet the definition of being significant in terms of our national security. This issue is more difficult to evaluate as it requires an in-depth item-by-item analysis including a review of the item's foreign availability, military utility, the Soviet's capability and the item's importance to the strategic interests of the U.S. From a purely technical standpoint the first three aspects of this review are certainly "doable" albeit not easily. The last aspect, however, is the most difficult and requires policy decisions at fairly high levels of the U.S. government. That is where, we believe, the U.S. government lacks strong technical expertise - to put into a strategic/economic national interest context the technical recommendations of the "tactical" advisors.

Let me give you some examples:

a. Dynamic Random Access Memories (DRAM) - Currently, the CCL places limits on DRAM exports to the USSR (and East Bloc) and the People's Republic of China of 4K bits and 64K bits, respectively. Sales of DRAM's above these limits must be approved to these countries on a case-by-case basis despite widespread availability of 256K bit DRAM's throughout the world. The U.S. government has recently imposed sanctions on the Japanese for dumping 256K DRAM's in third countries in large quantities despite a government-to-government agreement not to sell to third countries below fair market value. The fact is that these devices are available from sources in practically any country and the Soviets would have little trouble buying large quantities. In addition to the Japanese and the U.S., the South Koreans are also exporting large quantities of 256K DRAM's and they are not constrained by a COCOM agreement.

b. Video tape - Currently, video magnetic recording tape used in recording studios remains on the CCL if it exceeds 2400 feet in length. Such video tape is available from many sources in the world, particularly in the Pacific Rim. Undoubtedly, since it is manufactured in countries not constrained by COCOM rules, it is available in lengths exceeding 2400 feet.

Both of the items listed above are "commodity" products with numerous applications and end users and with widespread availability. It is difficult to conceive of an enforcement program that could be devised to prevent the Soviets from getting all they want. Our contention is that these situations must be rationalized by high level policy makers and that the entire CCL must be reviewed in this light.

2. Would you provide for the Committee a list of the specific formal requests that trade association, or members of your trade association, have made since July 1985 to the Department of Commerce for findings of foreign availability with regard to national security export controls? Which of these were submitted in 1986? Which were submitted in 1987?

2. We cannot provide to you a list of requests for foreign availability assessments that we have made to the Commerce Department; however, we are sure that the list would be quite small. Currently the foreign availability program at Commerce is focused on West-East availability which as our testimony before your committee indicates is not of major interest to ELAT companies. We are concerned about exports West-West and therefore have proposed expanding the foreign availability program to include West-West assessments. If the government were required to assess West-West availability to determine whether a license should be required, we are confident that thousands of requests would be submitted to DoC.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR HEINZ FROM
ALLAN I. MENDELOWITZ

Question 1

You note that almost half of export license applications each year could be eliminated without affecting national security. Have you based this determination on objective criteria, and what are they? Where would you have to "draw the line" in terms of technologies (e.g., AEN level) to eliminate this volume of licenses?

Answer

The basis for our determination was developed in our report "Export Control Regulation Could Be Reduced Without Affecting National Security" (GAO/ID-82-14, May 26, 1982). In that report, we stated that there were two levels of control both within the COCOM community and the U.S. licensing system for exports to communist countries. For items which might significantly enhance an adversary's military capability -- items which we described as high technology items -- unanimous approval was required from all COCOM members before export. For items below this level of military significance -- items which we referred to as low-technology items -- members must simply be notified after such items have been exported to a communist country. The distinction between high and low technology is made in Administrative Exception Notes (AENs) attached to certain commodities on the COCOM list. These AENs identify specific performance characteristics above which an item is considered militarily significant. Computers, for example, had 10 AENs at the time of our report and included such characteristics as speed and storage capacity. At that time, 48 of the 102 controlled industrial categories involved AENs. The remaining 54 categories required full COCOM review before export licenses could be approved.

The United States, unlike the COCOM system, controls exports to all countries, not just communist countries. All items which require U.S. export licenses to communist and non-communist destinations are identified in the U.S. Commodity Control List (CCL). CCL advisory notes identify the high/low technology distinction found in the AENs; the notes inform U.S. firms as to what applications will receive favorable consideration but do not relieve the exporter from any licensing requirement.

We found that less than 1 out of every 17 export license applications was carefully examined by the government. Even applications for exports to the Soviet Bloc were routinely approved when they were for items whose performance characteristics were below the AEN level. This resulted from the fact that DOD was primarily concerned with the export of technical data and high-technology products.

We therefore concluded that:

-- there is little justification for continuing to license the vast majority of low-technology products exported to communist countries as defined by AENs; and

-- there is even less justification for continuing to license low-technology products to non-communist countries.

The U.S. obligation to COCOM could be met by having the exporter report when a product is shipped to a communist country and provide documentation that the export will be used for peaceful purposes. Therefore, we concluded that licensing requirements could be eliminated by making the CCL advisory notes the technical threshold for obtaining export licenses. Based on extrapolation from a random review of export license applications we estimated the Government could have eliminated about 25,000 non-Communist country and 5,000 Communist country license applications out of the 64,518 applications submitted in fiscal year 1981 for proposed exports of items controlled for national security reasons.

Since our 1982 report steps have been taken to eliminate licensing requirements. Section 5(b)(2) of the Export Administration Amendments Act of 1985 removed the licensing requirement for exports to COCOM countries of goods or technology below the AEN level. Commerce established a new general license G-COM on September 23, 1985, to implement this change, including identifying those commodities eligible for this treatment. More recently, on March 17, 1987, Commerce published a notice of proposed rule that would (1) expand general license G-COM to allow shipment of additional low level dual use commodities to COCOM countries without a validated license and (2) establish a new general license GFW which would eliminate the validated licensing requirement for certain low level dual use commodities to about 77 free world countries.

Some conversations we have had with high technology industry representatives, however, indicate that rapid technological advances continually raise product performance levels so that the performance of current products has increased more rapidly than adjustments to the AEN and advisory notes. Therefore, there is a feeling in industry today that eliminating licensing requirements below the current AEN level will have less of an impact than when we made the original recommendation. If this contention is correct, there is a need for greater emphasis in applying the indexing provision of section 5(g) of the Act that authorizes the Secretary of Commerce to provide for annual increases in the performance levels of goods or technology subject to licensing requirements. It would than follow that the frequency with which the line is adjusted, whether the AEN or some other index, is as, if not more, important than where the line is drawn at any specific point in time.

Question 2

You indicate that foreign availability determinations are occurring much more slowly than intended due to difficulties of assessment and interagency policy differences, and in part because very few have been requested by industry. A number of proposals before the Committee would set firm deadlines to force the process to a conclusion. Would this approach solve the problem or are there assessment problems or industry concerns that will still undercut the process?

Answer

Setting firm deadlines will provide for more timely foreign availability determinations. We believe, however, that some other problems would still remain. They are:

-- Business confidential and intelligence information required to make informed foreign availability determinations may be difficult to obtain.

-- The subjectivity of foreign availability determinations combined with the time deadlines may pressure Commerce to make negative findings. Similarly Commerce has only limited resources working on foreign availability and any substantial increase in workload might create pressure to dispose of petitions with a negation determination.

-- The lack of decontrol actions may have discouraged industry participation in the process both as applicants and sources of information. As we noted in our March 11, 1987 testimony on foreign availability before the Subcommittee on International Economic Policy and Trade, House Committee on Foreign Affairs, there are 18 ongoing assessments which had been initiated as of December 31, 1986. Other than the wafer saw case, which finally resulted in west/east decontrol in March 1987, there have been no decontrol actions.

Question 3

GAO reviews many foreign affairs programs that require interagency coordination and approval -- in the National Security Council, the NAC, etc. My impression is that most of these foreign aid, military sales, agricultural sales and other decisions are made in a timely fashion. How do these decisions or the process followed in these cases differ from export control decisions? Is it possible to model the export control process more closely on these models to resolve present problems?

Answer

The interagency process in these other areas, such as foreign aid, military sales, and agricultural sales (which are also in part a foreign aid matter), also requires extensive coordination and is characterized by a prolonged decision making process. For example, in our report "The United States Response to the Ethiopian Food Crisis" (GAO/NSIAD-85-65, April 8, 1985) we stated that our analysis of the U.S. response to Ethiopian food needs showed that the United States had major concerns regarding providing humanitarian food assistance. These concerns varied by agency and impacted on the size and timeliness of the U.S. response.

In another area, agricultural trade policy, the National Commission on Agricultural Trade and Export Policy concluded that while 1985 changes in the interagency process produced improvements they failed, nevertheless, to address the question of interagency conflict which lies at the core of the government's inability to articulate comprehensive, long-term agricultural trade policy.

Consequently, we do not have a preferred interagency model on which to base changes in the interagency export control process. As a result, firm deadlines with clear action forcing mechanisms are probably the most effective way to ensure a more timely decision making process.

AMERICAN ELECTRONICS ASSOCIATION
EXPORT CONTROL TASK FORCE
Case Study Report

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EXECUTIVE SUMMARY

> "I don't consider the reform of the export control system... to be an international trade off between trade and national security. I believe the reform of the system will improve both the level of competitiveness and the level of U.S. security. This country is comprised of both economic and military security. One goes with the other."

Statement by Malcolm Baldrige
Secretary of Commerce
February 9, 1987

U.S. export licensing practices and procedures currently limit the global competiveness of the U.S. electronics industry. The following report sets out some examples of the types of competitive problems that American electronics companies face due to a more stringent and, at times, less efficient U.S. export control system. The export control examples contained herein are grouped into five categories: licensing delays; inconsistent and complex U.S. regulations; unilateral export controls; extraterritorial controls; and COCOM ally and foreign firm reactions to U.S. export controls.

It is hoped that the substance of this report will better inform public officials on the competitive problems firms face from current export controls and lead to legislative and administrative changes/improvements in the Export Administration Act and in the executive branch departments responsible for the implementation of export administration policy. The objective of such changes should be to minimize the competitive disadvantages that American firms now face due to the current licensing system and, at the same time maintain U.S. national security.

This report is not intended to be interpreted as critical of the executive branch departments and personnel responsible for the development and implementation of export control policy. Rather, our conclusion is that the complexity of the policies and the system make it difficult for these departments and personnel to discharge their responsibilities according to the "letter of the law."

The following report was prepared by AEA staff in Washington based on input supplied by AEA's member companies during the latter part of 1986. The 25 case studies contained herein are only a fraction of the total cases that could have been developed. Obviously, as an outside organization, it is impossible to verify the accuracy of any individual case.

However, these cases are illustrative of the types of problems consistently reported by electronics companies. Out of 25 cases, 14 different country destinations were involved and the total dollar value of lost U.S. sales abroad is estimated to be $26,648,000.

I. EXPORT LICENSE DELAYS

Currently, the Department of Commerce, on an annual average, reviews between 95,000-110,000 individual validated export license applications per year.

The electronics industry understands that the complex nature of export controls will occasionally lead to legitimate lengthy license reviews of applications that raise important policy/national security concerns. However, these applications should represent a small fraction of the total IVLs and should be occurring far less frequently than they do now.

AEA's data base indicates that far too many licensing delays take place on routine applications involving lower level technologies; or that are widely available from non U.S. sources; or that have been exported by manufacturers previously. In the international marketplace, where time often is the critical element to a sale, a license delay can often mean the difference between a penetrated overseas market and a lost sale, or a firm's reputation as a reliable supplier.

II. INCONSISTENCY AND COMPLEXITY OF US REGULATIONS

The U.S. Export Administration Regulations(EAR) are presently contained in a two-inches thick, constantly changing and growing loose leaf book. Differing interagency views over the interpretation of the regulations and the accompanying commodity control list indicate their ambiguous nature.

Smaller and medium sized firms, which often lack sufficient resources to focus on export controls, have difficulty in interpreting the regulations. The terminology used in the EAR to define parameters, often does not conform to industry terminology; the regulations are overlapping, duplicative, and unclear. Firms that are sometimes intimidated by the regulations, hire consultants and attorneys to obtain clarifications. Many firms on the other hand, choose not to export or do so incorrectly.

III. UNILATERAL EXPORT CONTROLS

Roughly seven percent of all entries on the U.S. commodity control list are unilaterally controlled by the U.S. Government. Because American manufacturers no longer have a monopoly on technology,* controls have to be on a multilateral COCOM-wide basis. Unilateral U.S. export controls are imposed in West-West trade-not just in trade with bloc countries.

AEA's case examples illustrate that when a U.S. manufacturer cannot obtain a license to ship a product overseas due to a unilaterally imposed control, there will likely be a foreign competitor who is operating under a different set of export control laws, and is more than willing to dominate in that particular market.

Eliminating many unilateral controls-those where multilateral agreement is not possible or where a unique and important U.S. capability does not exist- will promote national security because the Government will be able to focus its resources and efforts on the control of strategically important products rather than on lower level/non-critical items.

IV. EXTRATERRITORIAL CONTROLS

The United States alone among its COCOM partners, requires approval, in addition to whatever licensing the local foreign government may require, of sensitive U.S. origin products if they are to be reexported to another country--free world or proscribed.

Such reexport controls are contentious and divisive between the U.S. and its COCOM allies. Other countries view them as offensive and an invasion of national sovereignty. In effect, COCOM allies perceive the United States as attempting to impose its own export control laws and system on them.

AEA's case examples illustrate that, rather than put up with the U.S. reexport controls, firms in Western countries have begun to source parts and components from non-American suppliers. Some overseas firms are even beginning to design out American made products. Once these customers are lost, U.S. firms will find it extremely difficult to get back into these lost markets.

* In FY 1985, 43 percent of all patents granted by the U.S. were to foreign nationals, up from 27 percent in FY 1980. This fact illustrates that the U.S. does not dominate technology development in the world today.

V. COCOM ALLY AND FOREIGN FIRM REACTION TO U.S CONTROLS

U.S. export and reexport controls remain one of the most divisive and contentious issues in relations between the U.S. and its allies. U.S. controls are viewed as: too extreme; weakening European nation's competitive capabilities; extraterritorial; more political than national security conscious; increasing allied dependence on the U.S.; and costing other countries more than the U.S.

The result is a major opportunity to strengthen genuine multilateral controls is not fully being taken advantage of, because of arguments over excessive detail. Additionally, foreign firms are designing out American made products thereby eroding the global competitiveness of that industry upon which U.S. and free world security is based-the American electronics industry.

* * *

AEA PROPOSALS FOR LICENSING IMPROVEMENTS

Outlined in the appendix section is a list of administrative and legislative proposals to improve the export control system that the American Electronics Association has presented to both the Administration and Congress.

LENGTHY U.S. LICENSE DELAYS

"Our companies cannot afford to lose a contract because of bureaucratic slowdown; bureaucratic infighting... With the passage of every day, foreign competitors gain advantage because they do not have the same restrictions we do. If a U.S. exporter cannot assure his clients that he can deliver his product reliably and in a timely fashion, he simply loses his credibility and future orders."

Statement by Malcolm Baldrige
Secretary of Commerce
February 9,1987

COMPUTER PERIPHERAL CONTROLLER BOARDS TO SPAIN

A $500,000 export license application to ship 1565A peripheral controller boards to Spain was submitted by a California Corporation to the U.S. Department of Commerce in September, 1985. The commodities represented a blend of latest and second generation technology; have no known military application; and are widely available from abroad- particularly in West Germany and the United Kingdom. The boards are used in civil computer applications.

In October, 1985 the Commerce Department returned the application without action requesting a list of end users in Spain, with complete street addresses. The applicant responded the same month that 8 controller boards were to be used for demonstration purposes at a trade fair, some as capital equipment and some for resale. The firm also indicated that it must ship by October, 30 or the customer would cancel the order.

In December 1985, a license was finally granted. This was futile since the customer, in living up to its threat, had cancelled the $500,000 order and subsequently purchased the equipment from a foreign competitor. The firm has projected that $75,000.-$100,000. in subsequent annual orders were not placed with the firm by the spanish customer because it had developed the reputation as an unreliable supplier.

SEMICONDUCTOR MANUFACTURING EQUIPMENT TO HONG KONG

In June 1984, a U.S. company located in California submitted a $525,000 application to export semiconductor manufacturing equipment to Hong Kong. This equipment represented 6-7 year old technology. The U.S. Government in January, 1985 expressed concern about possible PRC ownership of the end user in Hong Kong. In March, 1985 the end user had placed its order with a Japanese competitor who delivered the product in April, 1985. In the meantime, the U.S. Government had lost the U.S. firm's application.

The firm estimates that, as a direct result of this particular lost sale which had crippled its credibility, at least $2.5 million in subsequent orders was not sought by this end user from the American firm over the past two years. The firm estimates that its Hong Kong marketshare has decreased as well to Japanese and Leichtenstein competitors.

TECHNOLOGY TRANSFER TO THE PRC

In February, 1985 the Indiana firm, Wavetek, Inc., negotiated a $520,000 licensing venture with the People's Republic of China to manufacture/light assembly in the PRC ECCN 1531 RF signal generators which represented 10 year old technology. These particular signal generators are widely available from abroad including the Soviet Union and are used in commercial communications. During the next 11 months the firm made two trips to the PRC, two trips to Washington, D.C., made numerous phone calls and hired a consultant to monitor the application.

In January, 1986 the firm was notified that the the Government had lost the application. A duplicate application was resubmitted and a final license was granted in April, 1986. However, because the Chinese, in March, 1986 instituted a change in policy with respect to such ventures, the PRC cancelled the contract.

The U.S. firm had spent $40-50 thousand over the course of the 13 months that the application was under review to sufficiently monitor the application and keep the Chinese from cancelling the deal. This included trips to China and Washington, telephone calls, telexes, retainers for attorneys, consultant's fees and general administrative staff time.

EARTHQUAKE SIMULATOR SYSTEM TO ROMANIA

In July, 1985 MTS Systems Corporation, a Minnesota firm, after having been given a verbal "OK" by the Department of Commerce, submitted a $1.8 million export license application to ship an ECCN 1565A Earthquake Simulator System to Romania. The Romanians expressed an interest in the equipment as a result of an earthquake they had in the mid 1970's. The equipment is used in testing and simulating the stength of buildings during earthquake conditions.

In September, 1985 the DOD denied the application and would not provide MTS with a clear reason for the denial.

Two MTS managers and legal counsel went to Washington to meet with the various licensing officers. While the firm received no conclusive reason for the denial, the firm was told to write a rebuttal letter indicating the peaceful uses of the system. Upon doing this, a license was issued in February, 1986 with a 45 day non-validity period. As such, actual date of validity was pushed to April 15, 1986.

COMPUTER PROTOCOL CONVERTERS TO SINGAPORE

February, 1986 Local Data, a company located in Northern California, applied for a license to ship 250 1565A protocol converters to Singapore. The converters are to be used for interfacing ASCII terminals to IBM small frame and mainframe networks. In late April, 1986 the U.S. expressed concern that this equipment could be reexported to the East Bloc by the foreign consignee. In response, Local Data made known to the Departments of Commerce and Defense that the foreign consignee was an already approved and current consignee on other American firm's distribution licenses for the same commodities. In addition, Local Data submitted the foreign consignee's customer lists and his customer's letter of assurance. Moreover, this product is useless without the IBM mainframe computer which would have already been exported, delivered and installed.

After lengthy delays and requests for additional information, in mid June, 1986, the license was granted.

The entire 4 month process for this application alone cost the company between $3,500-$4,000. in monitoring costs, phone calls, staff time and mail correspondence.

COMPONENTS AND TECHNICAL DATA TO EAST GERMANY

In October, 1985 a Minnesota firm applied for a license to ship technical data and electronic components worth $490,000. to East Germany. The data and equipment, representing 10 year old technology, was to enable the end user to repair printed circuit boards for $10,000,000. worth of process automation equipment that the U.S. firm had sold to the customer over the last 10 years. Since the data and parts are product specific, they were not widely available from abroad.

After a zig zag license review pattern, a lost application and misplaced paperwork, the license was approved in September 1986-11 months from the date of original application.

The firm estimates that the delay had cost it $5,000. in administrative staff time, telephone calls, and telexes. In addition, it has damaged the firm's reputation as a reliable supplier. The customer has stated that it fears doing further business with the company due to the difficulties in getting adequate servicing of products it previously purchased.

INTEGRATED CIRCUITS TO PRC

In August, 1986 a northern California firm, in breaking into the Chinese market(it was to be their second shipment), applied for a license to ship 1564A integrated circuits(latest generation technology) to the People's Republic of China. Such equipment has been supplied to the Chinese before and was to be used in civil applications. The Chinese made it clear that this shipment was a test to determine the U.S. companies' reliability as a supplier.

During December, 1986 a status call was made to the Department of Commerce whereupon the reviewing licensing officer picked up the case and determined that it had to be reviewed by COCOM.

The case remains under review-nearly 5 and a half months from the point of original application.

While the Chinese have not yet threatened to cancel the order, the firm's reliability as a supplier for any commodity is diminishing each day that a license is not issued.

INCONSISTENCY AND COMPLEXITY OF THE EXPORT ADMINISTRATION REGULATIONS

"The U.S. Export Administration Regulations are presently contained in a two inches thick, constantly growing loose leaf book. Only licensing specialists can understand and contend with these lengthy, overly complex regulations. As a result, many smaller and middle sized U.S. firms simply do not consider exporting to be a worthwhile activity or else, in ignorance, do so imperfectly. And if U.S. firms have difficulty, consider how much more difficult it is for customers and others outside the United States who have a vital role in the control process to understand and comply. To make matters worse, U.S. and COCOM licensing officers have difficulties in understanding and applying regulations, leading as in the case of too lengthy and complex controls, to licensing delays and inefficiencies in reaching decisions."

Statement of Thomas A. Christiansen
Manager, International Trade Relations
Hewlett-Packard Company
Before the
House Foreign Affairs Subcommittee
April 10, 1986

SPARE PARTS TO INDIA

In June, 1985 MTS Systems Corporation, a Minnesota company, applied for an export license to ship ECCN 1568A model 433 computer interfaces to India to be used as spare parts in an automated test system that MTS had sold to India under a validated license in September, 1982. The overall system is commercially used to evaluate alloys and has no direct military application. Because of their age, the spares, representing 11 year old technology, are not available from abroad.

In July, 1986 the Department of Commerce denied the application on the grounds that India has not signed the nuclear non-proliferation treaty.

Because the firm had shipped the entire automated test system under a validated export license in 1982, it believed there would not be any problems in obtaining a license for the spares. Therefore, the firm had gone ahead and manufactured the order(due to the age of the spares the manufacturing process had to be developed again at great cost.)

The end results are: the $13,000. order will be cancelled, the firm will not be able to dispose of the obsolescent spares, the firm is viewed as an unreliable supplier because it cannot service a commodity it previously supplied, and the total company loss is documented at $25,000-$30,000.

AMERICAN FIRM DISCOURAGEMENT

Physical Accoustics Corporation management(a New Jersey firm), in pursuing international markets, has decided not to promote a certain product line that contains hard disks. The product, acoustic emmission systems are classified as ECCN 1565A and represent 5 year old, albeit widely available technology.

The firm has concluded that the expected costs and resources required to the firm to obtain export licenses for this product line were such to preclude it from aggressively marketing the product overseas. In the meantime, overseas competitors in the United Kingdom, West Germany and Japan have successfully marketed similar products throughout the world.

WAVEGUIDE FILTERS TO SWEDEN

In September, 1986 Gamma-F Corporation applied for an export license to ship ECCN 1537A Waveguide Filters worth $36,790. to Sweden. This equipment, which represents 5 year old technology, will be used in a radar system for the Brazilian Armed Forces. The manufacturer in Sweden has indicated that the Department of State has granted other U.S. suppliers licenses to ship similar, if not more complex equipment, to the same end users in Brazil. The filters are also widely available from abroad particularly the United Kingdom.

Upon checking the status of the application, Gamma-F was told the application had been lost. A reapplication was made in October, 1986. Checks on the status of the original application during November revealed that the Department of State had lost the application. The Department of Defense, at the same time, was telling the firm that it had the application.

Between November-December, the Departments of State and Defense could not agree who had the application. On December 9 the Department of Defense, via telephone, indicated that a license would not be granted.

In mid December, a license for the shipment arrived at Gamma-F. A week later, shipment was made to Sweden. At the end of December, the same person who had approved the license at the Department of State, called to tell Gamma-F that the license was suspended and that the reason for the suspension would be forthcoming in a subsequent letter. At that time, OMC was told that the goods had been shipped upon receipt of the license. A letter received January 9, merely stated that the license was suspended and to return the license if the goods had not been shipped. On January 15, however, Gamma-F received a telex from the Washington representative of the Swedish manufacturer stating that the suspension had been revoked and license approved as of December 15, 1986. No further communication had been received from OMC as of February 2, 1987.

COMMODITY CLASSIFICATION PROBLEM

The U.S. Government has ruled that most printers for computers, impact and non-impact, are decontrolled items and may be exported under general license G-DEST, CCL number 6599G. Certain spare parts for these printers, however, are not decontrolled and must be licensed under CCL numbers 1564A or 1565A. Examples of such products include circuit card assemblies such as power supply boards, voltage regulator or rectifier boards, etc... All are typically designed exclusively for a given printer and have no dual use(military) applications.

As such, exports of spare circuit card assemblies to service commodities previously exported, require a separate individual validated license. Rather than deal with the long lead time required to obtain such licenses, many end users have resorted to buying extra printers(G-DEST) which are then canibalized for the

spare parts. Because this is a very expensive procedure for procuring spare parts, it will not be long before the customers switch their business to other countries.

COMMODITY INTERPRETATION PROBLEMS

Laser printers have been decontrolled by the U.S. Government and may be exported under general license G-DEST, CCL number 6599G. Such products consist of two products: a print engine and electronics. Without the electronics the print engine cannot interpret the instructions from the main computer and therefore can only print test patterns. A U.S. company cannot obtain a final decision as to whether the present engine is decontrolled or controlled under CCL number 1565A, printers or 1522A, lasers. As a result, if an overseas customer wants to purchase only the print engine and develop the electronics himself, the customer must obtain an individual validated export license. If time is a major consideration, the customer can purchase the entire printer at a higher cost than for the purchase of the engine itself and thus not have to obtain an export license.

SPECTROMETER TO THE EAST BLOC

In June, 1983 a Northern California firm submitted an export license application to ship a Spectrometer with 2 broadband probes, 1 M byte memory expansion, an array processor, and 2-30 M byte Winchester disks to the East Bloc. In November, 1983 the Government recommended denial of the $485,000 application. The firm, instead of being granted a rejection, requested that the application be returned without action. The Government stated that the firm could not ship the system, which was to be used in the analysis of organic and chemical compounds, with the array processor, user programmability or the Winchester Disk.

In January-April, 1984 the firm attempted to deal with the concerns identified by DOD. First, the company stated it could, but with great reluctance, eliminate user programmability. The problem here was that its equipment would not be competitive with a West German competitor's system!

Second, in April 1984, the company sought and found a DOD acceptable disk that, with some R&D, could be made somewhat compatible with the system. The odd point here was that the proposed disk was faster and had considerably more capacity than the Winchester that the firm sold as standard with its system!

In May, 1984 the company learned that the array processor(and therefore user programmability)could be exported to the East Bloc. In response, the firm submitted another application for a spectrometer with an array processor, a printer, a plotter and a disk.

In November, 1984 the firm learned that Winchester disks could be exported to the East Bloc. It submitted the required amendment and a final license was granted in May, 1985 nearly two years after the date of original application!

Luckily, the firm was able to maintain the buyer's interest throughout the process and completed the sale. However, the firm estimates its overall expenses to comply with inconsistent U.S. licensing concerns at $10,000.

SPARE PARTS TO IRAQ

On May 8, 1985 Branson/IPC, a Northern California firm, applied for an export license to ship spare parts for an ECCN 1355A Plasma Etching System it had previously exported to Iraq under a validated license. The spares represent 8 year old technology, have no known military application and will be incorporated into a system for civil application that, if exported today, would not require a validated license.

The end user is not listed in the table of denial orders and has a dependable record as a reliable end user. The U.S. Government has approved exports of the same commodity to the same ultimate consignee in the past. The license application is still pending as of 3/1/87.

COMMODITY CLASSIFICATION PROBLEM

Identix Incorporated, located in Northern California, manufactures an electronic security unit whose function is to prevent access by unauthorized persons to commercial and private property. The unit is a physical protection device that validates a request for entry by a mathematical comparison of the individual's actual finger with a pre-recorded characterization of the same finger. The unit is classified as ECCN 5597B.

The criterion for an item falling under 5597B is that it be used in crime control, investigative and/or law enforcement purposes. Identix believes that the product is not and cannot be used in either capacity. Despite the firm's repeated appeals to remove the classification, the Government has insisted that the product remain classified as ECCN 5597B and therefore controlled for export.

As a result, Identix is required to obtain a validated export license to supply this commodity to free world destinations for civil end use applications. On average, such applications have been taking 3 months for the Government to process.

UNILATERAL U.S. EXPORT CONTROLS

"The United States is no longer as dominant as it once was in many dual use technologies. There are Western industrialized countries--Japan, for example--whose product and manufacturing technology are equal to our own or lead the world. In addition, dual use technology is diffusing very rapidly. The newly industrializing countries are a case in point--e.g., South Korea and Taiwan--now have the capability to manufacture dual use items which, in some cases, exceed Soviet technical capabilities...in selected areas, their manufacturing capability is now...at a point where they are alternative sources of the technology that the Soviets are seeking"

Statement of Lew Allen, Jr.
Chairman, National Academy of Sciences
Panel on Technology Transfer
Before the
House Subcommittee on International Trade
February 3, 1987

"When a U.S. manufacturer cannot obtain a license to export an item abroad due to a unilaterally imposed control, there will likely be a foreign competitor who is operating under a different set of export control restrictions, and is more than willing to take control of that particular market."

J. Richard Iverson
President
American Electronics Association

EXPORT LICENSE FOR EXPO HI-TECH '86 TRADE SHOW
Shanghai, Peoples Republic of China

In June, 1986 a California Electronics firm submitted an export license application to demonstrate ECCN 1519A Digital Optical Transmitters and Receivers at the EXPO HI-TECH '86 Trade Show in Shanghai, PRC. This latest generation commercial technology is widely available worldwide particularly in Japan, West Germany and the United Kingdom. Any telecommunications or data communications systems that use optical fibers incorporate these types of transmitters and receivers. There are now several such systems in operation in the PRC.

The license was denied on national security grounds in October, 1986. As a result, the American firm could not participate in the highly successful trade show in which competing American and Japanese firms had demonstrated similar electro-optical products. The competing firms in attendance were documented as having concluded U.S.$4-5 million worth of business.

Not only did the firm lose the potential sale of its demonstrated product worth $93,000., but lost uncalculable future business because it did not get the product or firm exposure it believes was required to penetrate and compete in the PRC market. Moreover, the firm spent and lost $10,000. in administrative costs in its effort to obtain the necessary license to participate.

The firm projects that it will have to spend the next two and a half years and $60,000. to mitigate the competitive edge given to its competitors by the firm's absence from the Trade Show as well as to develop key ministry contacts and market leads(which would have been easier to obtain from the trade show).

NOISE MEASUREMENT TESTING EQUIPMENT TO THE PRC

In July, 1986 a Ohio Corporation applied for a license to ship ECCN 6599G Noise Measurement Testing Equipment(with an associated ECCN 1565A controller that fell within PRC green zone) to the People's Republic of China. The firm asked that its application be treated expeditiously due to a foreign competitor in West Germany who had promised that his product would not be subject to any license delays.

The case was exchanged between the DOC and DOD several times unnecessarily and had to be retrieved from being sent to COCOM. Subsequently, various Government officials indicated that the case never should have been referred either to DOD or COCOM in the first place.
The license was finally granted in February 1987. It is uncertain if the Chinese will accept the equipment at this late date.

Not only can the firm lose the $300,000. order but will lose $5,000.-$7,000. invested to obtain the sale. Moreover, while extremely difficult to gage, the firm believes that with respect to this particular customer, its reputation as a reliable supplier has been severely damaged.

PLASMA ETCHING SYSTEMS TO THE PRC

Since January 1984 many U.S. semiconductor manufacturing equipment firms have made numerous attempts to obtain licenses for their single wafer plasma etching systems to the PRC. Such systems are used in the commercial semiconductor manufacturing process. The Government, according to the Export Administration Regulations, will allow batch and barrel etching systems to the PRC but prohibits export of single wafer etching systems to China. The fact of the matter is that there is no real functional difference between the two systems.

Batch systems, which are currently used in the manufacture of the most sophisticated devices under development and production including very high speed integrated circuit devices, now hold 50 percent of the worldwide market. This indicates that batch systems, which are excluded from the EAR, are being purchased worldwide as state of the art equipment and single wafer systems are being controlled.

Moreover, COCOM allies-namely United Kingdom, France, and Japan-are delivering late model etch equipment to China which is technically equivalent to U.S. single wafer systems. It has even been determined that the United Kingdom has shipped batch wafer equipment to the Soviet Union.

As a result, industry sources estimate that during the last three years, U.S. manufacturers of plasma etching equipment lost $10,775,000. in international business to foreign competitors who did not have to undergo the same export licensing practices and procedures as foreign competitors.

SPECTROMETER TO CZECHOSLOVAKIA

In May, 1985 a California company sought to market a 1565A Spectrometer, representing 6-7 year old technology, to Czechoslovakia. The spectrometer would be used by Czechoslovakian R and D facilities engaged in civil research to analyze organic and chemical compounds. The potential Czech customer expressed concern about the likelihood of the firm receiving an export license.

The Czech customer subsequently sent a telex to a West German competitor asking whether their spectrometers fall under COCOM control. The West German competitor responded that the transaction would not fall under COCOM regulations if the Czech end user ordered the instruments from the foreign competitor's affiliate in Switzerland.

The Czech customer placed its order with the Swiss affiliate who delivered the $475,000 order in December, 1985. As a result, the firm has lost Czechoslovakian marketshare to its major West German competitor.

ELECTRON BEAM SYSTEM PROJECTION MASK ALIGNMENT SYSTEM TO HONG KONG

Knowing of the government's concerns about semiconductor manufacturing equipment, Perkin-Elmer Corporation, in June 1985, sought and obtained the Department of Commerce's opinion on shipping 1355A Electron Beam and Projection Mask Alignment Systems to three end users in Hong Kong.

The Department of Commerce stated that possible diversion of such exports to the anticipated consignees existed. The firm further recognized that there was significant government reticence to provide assurance to it for prompt processing of its license applications. As a result of these findings, the firm decided not to market its products in Hong Kong because it felt and feels that it could not obtain the required licenses.

Based upon subsequent on-site customer visitations with the end users listed above and other potential customers as well as information from company contacts in the region, Perkin-Elmer has projected from July, 1985-June, 1986, that it has lost $11,000,000. in business to Japanese competitors who have allowed the export of such commodities to Hong Kong.

DECREASED BLOC MARKETSHARE TO COCOM COMPETITORS

In mid 1979 MTS Systems Corporation had applied for and received export licenses to ship ECCN 1565A Generalized Test Equipment to the Soviet Union. In December, 1979, while having $2.5 million in Soviet orders in work process, the Carter Administration revoked all MTS' export license applications to the Soviets. Over the next 6 years MTS managed to gain license approval for the equipment already in process at the time of the embargo. These approvals occurred in fits and starts thus giving MTS the perception that there were no guarantees in doing business with the East Bloc because of the uncertainty of the licensing process.

Due to this situation, MTS management, rather than financially expose its company to the unpredictability of the export license process, decided to eliminate 97% of its marketing efforts to the Soviet Union and East Bloc. As a result, COCOM competitors quickly filled the vacuum(United Kingdom/West Germany). This was confirmed by customers at an MTS sponsored trade show in Moscow.

This non-competitive situation has allowed MTS' main competitor in West Germany to achieve exceptional profit margins in the USSR and use these profits to help underwrite competitive situations in other parts of the world where MTS is active. A report from a customer in China stated that MTS lost a large earthquake simulator sale to Schenck in 1981 due to a low price and that the lower price was due to profits derived in the Soviet Union.

Moreover, from 1975 until 1980, MTS Systems Corporation held a predominant market position in the USSR/Eastern Bloc Countries. MTS in 1979 went from a high of 12% of sales in the USSR/Bloc to a low of 0% in 1982 with a slight recovery to 1 or 2 percent in 1985-1986. MTS' sales average in the 1975-1979 period was approximately $5 million per year with MTS estimated to have 65% of the market and Schenck, the major West German competitor, estimated to have about 20%. In the 1980-1983 period, the average was less than $400,000. per year or a 90% reduction and MTS's old customers have stated that Schenck has taken its place in the market.

The end result is the Soviets were not denied substitutable systems and that MTS's market share has declined in the USSR and East Bloc.

PLASMA ETCHING SYSTEMS TO THE PRC

On December 18, 1984 Branson/IPC which is located in California, applied for two export licenses to market 1355A plasma etching systems to the People's Republic of China. The systems represent 8 year old technology, are widely available from Japan, United Kingdom, France and the Soviet Union and are used in the commercial semiconductor manufacturing process. Several such systems are now in operation in the PRC.

After several "RWA's", Government(TAC) reviews, the license applications were approved with conditions by the Government and are now under COCOM review.

The Chinese have been threatening to cancel the order for the last month or so.

The firm has documented spending $70,000. to adequately monitor the applications over the past two years. This includes trips to China, Washington, technical presentations, administrative costs and phone calls.

CONTROLLERS TO JAPAN/SOVIET UNION

In July, 1986 Universal Instruments Corporation, situated out of upstate New York, applied for a reexport license to ship $1,009,309 worth of ECCN 1565A 8222J controllers from Japan to the Soviet Union. These controllers represent 6-7 year old technology, are to be used in color television sets, are widely available from the United Kingdom, France, West Germany, Italy, Sweden and Japan and have no direct military application. Moreover, this sale if consumated, represents $4,500,000 in additional sales over 1987.

Because this application was a reexport of American made products from Japan, both the U.S. and Japanese firms had to apply to their local governments for licenses. The Japanese distributor has received its export license while the U.S., in November, 1986, had denied the American firm's reexport request due to "derogatory information with regard to the Soviet end user".

Although Universal has filed an appeal with the Department of Commerce, should the appeal process fail, the firm will lose the initial $1,000,000 sale; lose the $4,500,000 in sales in 1987; ruin its relationship with its Japanese distributor; and lose the $8,000-$10,000 invested to obtain the sale.

EXTRATERRITORIAL U.S. EXPORT CONTROLS

"The vigor with which U.S. re-export regulations are now being imposed, together with a plethora of in-house controls and audits; the risk of inadvertant non-compliance and possible cessation of supply from the U.S. source, have all contributed toward a close reevaluation of our purchasing strategy...With the foregoing in mind, our purchasing policy is to select from U.K. or European suppliers wherever possible and all other things being equal i.e, adequate technical performance and price. Consideration is also being given to Japanese equipment."

T. Nicholson
U.S. Export Control Administrator
British Aerospace Ltd.

CUSTOM INTEGRATED CIRCUIT TO SWITZERLAND

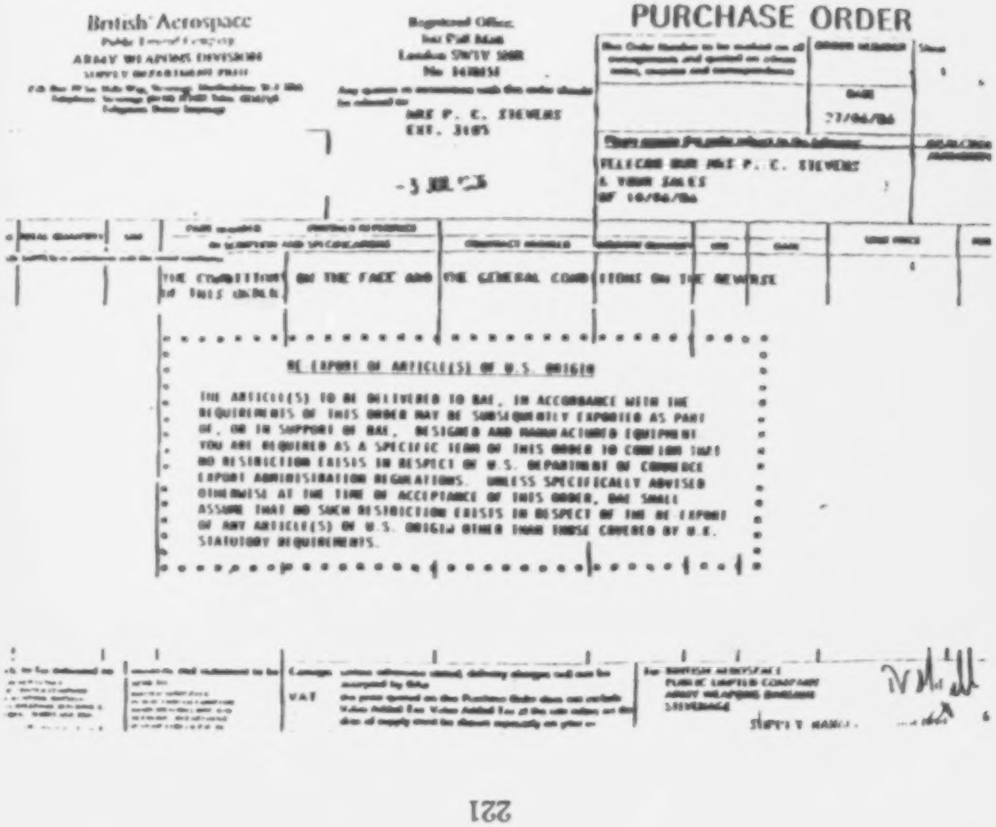
In December, 1984 International Microelectronic Products, a Northern California firm, was awarded a contract by a major Swiss company to develop a basic custom integrated circuit classified under ECCN 1564A. The technology, not the latest generation, was a minor modification to the basic IMP wafer fabrication process and is widely available from abroad. The end product was to be an energy management system for industrial and predominately residential applications.

The initial contract was for $30,000. Subject to successful development of the above modification, a second award worth $30,000. would follow. Following prototype delivery, the customer expected to place production orders for IMP to manufacture the custom circuit in volume. The initial year's production effort was valued at $1,000,000. with year two and later year's production valued at $3,000,000.-$4,000,000. per annum.

In conformance with U.S. export regulations, IMP requested that the customer execute a letter of assurance whereby the customer would certify that no technical data would be made available to specifically identified Eastern Bloc countries.

The Swiss company refused to sign such a certification.

The Swiss company cancelled the IMP order and placed it instead with another West European semiconductor company.



British Aerospace
Public Limited Company
ARMY WEAPONS DIVISION

PURCHASE ORDER

MRS P. C. STEVENS
EXT. 3105

-3 JUL '85

27/06/86

PLEASE ... MRS P. C. STEVENS
& YOUR SALES
OF 10/06/86

THE CONDITIONS OF THIS ORDER ON THE FACE AND THE GENERAL CONDITIONS ON THE REVERSE

RE EXPORT OF ARTICLE(S) OF U.S. ORIGIN

THE ARTICLE(S) TO BE DELIVERED TO BAE, IN ACCORDANCE WITH THE REQUIREMENTS OF THIS ORDER MAY BE SUBSEQUENTLY EXPORTED AS PART OF, OR IN SUPPORT OF BAE, DESIGNED AND MANUFACTURED EQUIPMENT. YOU ARE REQUIRED AS A SPECIFIC TERM OF THIS ORDER TO CONFIRM THAT NO RESTRICTION EXISTS IN RESPECT OF U.S. DEPARTMENT OF COMMERCE EXPORT ADMINISTRATION REGULATIONS. UNLESS SPECIFICALLY ADVISED OTHERWISE AT THE TIME OF ACCEPTANCE OF THIS ORDER, BAE SHALL ASSUME THAT NO SUCH RESTRICTION EXISTS IN RESPECT OF THE RE-EXPORT OF ANY ARTICLE(S) OF U.S. ORIGIN OTHER THAN THOSE COVERED BY U.K. STATUTORY REQUIREMENTS.

Carriage

VAT

For BRITISH AEROSPACE
PUBLIC LIMITED COMPANY
ARMY WEAPONS DIVISION
STEVENAGE

SUPPLY MANAG...

British Aerospace
PUBLIC LIMITED COMPANY

ARMY WEAPONS DIVISION
P O Box 9 Six Hills Way
Stevenage
Hertfordshire SG1 2DA

Telephone Stevenage [illegible]
Telex [illegible]
Ext 2037

11th. July 1986

Dear Sirs,

Subject: U.S. EXPORT CONTROL

Further to our meeting and subsequent telephone discussions this note is to confirm our views in respect of U.S. re-export control.

Like many other companies British Aerospace is sympathetic to the stated U.S. goal of denying the Soviet bloc, and certain other countries, access to strategic goods and technology. The U.K. Export Regulations and the operation of COCOM are both mechanisms by which the U.K. Government achieves the same common goal.

The imposition of U.S. re-export control is an unwelcome and significant burden which may have the effect of restricting our competitiveness and speed of response in overseas markets.

For many years U.K. end users and manufacturers have enjoyed a strong meaningful relationship with suppliers of U.S. equipment and technology. Both parties have derived benefit from a trading relationship free of any extra territorial restrictions.

It is without doubt the wish of British Aerospace that such a relationship should continue 'ad infinitum'.

The vigour with which U.S. re-export regulations are now being imposed, together with the plethora of in-house controls and audits; the risk of inadvertent non-compliance and possible cessation of supply from the U.S. source, have all contributed towards a close re-evaluation of our purchasing strategy.

You will appreciate that like any manufacturing based organisation we wish to eliminate, as far as is practicable and possible, any risk to our supply lines for bought-out material, components and equipment. The U.S. re-export controls represent one such risk.

- continued -

With the foregoing in mind our purchasing policy is to select from U.K. or European suppliers wherever possible and all other things being equal i.e. adequate technical performance and price.
Consideration is being also given to Japanese equipments.

Of course, where no technical alternative is available then goods of U.S. origin will be procured and BAe. will ensure full compliance with both the written word and spirit of U.S. Re-Export Regulations.

I do hope this is not misconstrued as being anti U.S. However, I am sure that you will fully appreciate our desire, and need, to maintain an unfettered right and ability to export equipment manufactured by British Aerospace and to maintain secure lines of supply.

Your recent assistance in establishing British Aerospace as a Foreign Consignee is very much appreciated.
I look forward to confirmation that the application was successful.

Yours sincerely,

T. Nicholson
U.S. Export Control Administrator

11th. July 1986

COCOM ALLY AND FOREIGN FIRM REACTION TO U.S. EXPORT CONTROLS

"U.S. export controls hinder Western European access to American technology and go against general good neighbor policy."

"The U.S. is the one most concerned about the consequences of undesirable Eastern bloc access to technology, but Western Europe must bear the consequences of the policies."

Statements made by the European Parliment

March 10, 1986

*Note:the following represents a compendium of foreign articles, reports and documents that illustrate foreign firm and government reaction to U.S. export controls. Letter codes at the margins of the first three documents indicate brief cranslations which immediately follow each of the first three articles.

ARTICLE 1

Deutscher Bundestag
10. Wahlperiode

Drucksache 10/5197

3. 03. 86

Unterrichtung

durch das Europäische Parlament

Entschließung zum Technologietransfer

DAS EUROPÄISCHE PARLAMENT –

— in Kenntnis des Entschließungsantrags von Herrn Linkohr zu den Beschränkungen des internationalen Technologietransfers durch die USA und deren schädlichen Auswirkungen auf die industrielle Entwicklung der Europäischen Gemeinschaft (Dok. 2-721/84),

— in Kenntnis des Berichts des Ausschusses für Energie, Forschung und Technologie (Dok. A2-99/85),

A. in der Erwägung, daß der wissenschaftliche und wirtschaftliche Fortschritt auf dem freien Austausch von Ideen, Kenntnissen und Informationen beruht,

B. in der Erwägung, daß zwischen Westeuropa und den USA enge Verflechtungen auf wissenschaftlichem und wirtschaftlichem Gebiet bestehen, was u. a. in der großen Zahl promovierter Studierender und führender Wissenschaftler europäischer Herkunft in den USA und in der Tatsache zum Ausdruck kommt, daß die Produktion der amerikanischen Unternehmen in Westeuropa das Volumen des Gesamtexports der USA übertrifft, und unter Hinweis darauf, daß ein technischer Vorsprung, den ein westliches Land in irgendeinem Bereich erwirbt, im Laufe der Zeit der gesamten Industrie im Westen zugute kommt,

C. unter Hinweis darauf, daß in den USA seit Mitte der 70er Jahre die Besorgnis zugenommen hat, daß die Sowjetunion ihr Verteidigungspotential durch westliche Technologie stärken könnte,

D. unter Hinweis darauf, daß die USA immer häufiger zur Geheimhaltung von Technologien, zur Ausfuhrkontrolle und zu vertraglichen Geheimhaltungsvorschriften übergehen und daß als Folge davon amerikanische Technologie auch für die westeuropäischen Bündnispartner nur schwer oder erst nach

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Zugeleitet mit Schreiben des Generalsekretärs des Europäischen Parlaments – 26 852 – vom 3. März 1986.
Das Europäische Parlament hat die Entschließung in der Sitzung vom 21. Februar 1986 angenommen.

einiger Zeit verfügbar ist, was ihre Exporte in die USA und ihre Importe aus den USA beeinträchtigt;

E in der Erwägung, daß die amerikanische Gesetzgebung zu den Exportkontrollen sehr viel umfassender ist als die entsprechenden Bestimmungen in anderen Ländern und sich u. a. auch auf die Wiederausfuhr aus anderen Ländern bezieht;

F in der Erwägung, daß eine immer größere Zahl von Technologien sich sowohl für zivile als auch für militärische Zwecke eignet;

G in der Erwägung, daß die zivilen Anwendungen neuer Technologien seit Mitte der 70er Jahre gegenüber den militärischen Anwendungen einen wachsenden Vorsprung gewonnen haben, daß die Kontrolle über die militärische Technologie seitdem nur durch die Ausweitung der Kontrolle über zivile Technologien sichergestellt werden kann und daß diese Entwicklung in den USA bereits festzustellen ist, u. a. bei den auf der METAL-Liste verzeichneten Technologien;

H in der Erwägung, daß die Politik der amerikanischen Regierung offiziell damit begründet wird und einzig zum Ziel hat, daß nur bei militärisch empfindlicher Technologie, nicht aber bei aller militärisch anwendbaren Technologie verhindert werden soll, daß sie vom Ostblock genutzt werden kann;

I in der Erwägung, daß die USA in der Praxis jedoch versuchen, den Zugang des Ostblocks zur gesamten militärisch anwendbaren Technologie zu verhindern;

J unter Hinweis darauf, daß die USA vor allem von den Getreidelieferungen in den Ostblock profitieren, während die wirtschaftliche Bedeutung der europäischen Exporte in den Ostblock in erster Linie den Industriesektor betrifft, ferner unter Hinweis darauf, daß diese Exporte das Ergebnis eines Wettbewerbs unter Industrienationen sind;

K unter Hinweis darauf, daß die europäischen NATO-Partner im COCOM-Ausschuß auf amerikanischen Druck einer erheblichen Erweiterung der Listen der Waren und Kenntnisse zugestimmt haben, die nicht in den Ostblock ausgeführt werden dürfen, und sich zur Einhaltung dieser Embargo-Vereinbarungen verpflichtet haben;

L unter Hinweis darauf, daß die USA über diese multilateralen Embargo-Vereinbarungen hinaus zusätzlich einseitige Embargo-Listen anwenden und daß Westeuropa in der Praxis dadurch ebenfalls von einem amerikanischen Embargo betroffen ist, nämlich für die technologischen Produkte, die es selbst zwar in den Ostblock liefern will, die USA jedoch nicht, was einschneidende Konsequenzen für die Unternehmen in Westeuropa hat und ihre Abhängigkeit von den Vereinigten Staaten erhöht;

M in der Befürchtung, daß die Europäische Gemeinschaft – wenn sie nicht geschlossen auftritt – aufgrund ihrer technischen Abhängigkeit auch politisch immer abhängiger und somit erpreßbar wird;

N in der Erwägung, daß nach der inneramerikanischen Gesetzgebung die rechtliche Definition des Exports so beschaffen ist, daß für Ausfuhren aus der EG ebenfalls die US-Rechtsvorschriften gelten, soweit es sich um Zubehörteile oder Technologie amerikanischen Ursprungs handelt, was ungerechtfertigterweise auf einen Anspruch auf Extra-Territorialität der amerikanischen Gesetzgebung hinausläuft;

O in der Erwägung, daß diese Politik schwerwiegende Auswirkungen auf die amerikanischen multinationalen Unternehmen in Westeuropa hat, die nahezu ohne Ausnahme hochtechnologische Produkte herstellen; diese Produkte können nicht in Ostblockstaaten ausgeliefert werden;

P unter Hinweis darauf, daß die europäischen multinationalen Unternehmen, für die die USA als Lieferant von Know-how oder Zubehörteilen oder aber als Absatzmarkt von Bedeutung sind, bedingt durch die extraterritoriale Wirkung der amerikanischen Exportgesetze den osteuropäischen Markt meiden, wenn dies offenkundig ihre Belieferung durch die USA sowie – was rechtlich noch bedeutender ist – ihre eigenen Absatzmöglichkeiten in Amerika gefährdet;

Q in der Erwägung, daß nach einer jüngsten Schätzung der CIA 70 % der von der Sowjetunion erworbenen militärisch anwendbaren Technologie entgegen den obengenannten amerikanischen Gesetzen beschafft werden und daß die USA nicht in der Lage waren, den Transfer neuer Technologien, der allgemein als abträglich für die westliche Verteidigung angesehen wird, zu unterbinden;

R in der Erwägung, daß die vorstehend genannten Faktoren zu Recht oder zu Unrecht in Europa allgemein zu der Auffassung geführt haben, daß die amerikanischen Bestimmungen, die über die COCOM-Ausschuß erzielten Vereinbarungen hinausgehen, zum Teil von nationalen handelspolitischen Überlegungen genereller Natur, die eher von Politikern als von Vertretern der Wirtschaft kommen, beeinflußt werden —

1. stellt fest, daß die Anwendung einseitiger Beschränkungen durch die USA beim Technologietransfer über die multilateral vereinbarten COCOM-Kontrollen hinaus den Zugang Westeuropas zur amerikanischen Technologie einschränkt und einer gutnachbarlichen nationalen Politik unter Verbündeten zuwiderläuft;

2. stellt fest, daß die USA zwar am stärksten über die Folgen des unerwünschten Zugangs des Ostblocks zu westlicher Technologie besorgt sind, daß jedoch Westeuropa überwiegend die Belastungen zu tragen hat, die sich aus der dadurch bedingten restriktiven Politik ergeben;

3. weist in bezug auf den Technologietransfer zwischen Mitgliedstaaten der Gemeinschaft auf den möglichen Konflikt

zwischen den COCOM-Vorschriften und den Bestimmungen des EWG-Vertrages aus, fordert die Kommission auf, die Vereinbarkeit der Anwendung der COCOM-Vorschriften durch die Mitgliedstaaten mit den Bestimmungen des Vertrages zu prüfen und, falls erforderlich, die Angelegenheit vor den Gerichtshof zu bringen;

4. bekräftigt, daß die COCOM-Vereinbarung notwendig ist, um die Ausfuhr militärisch empfindlicher Technologie nach Osteuropa zu verhindern, ist jedoch der Ansicht, daß
   - die COCOM-Liste in regelmäßigeren Abständen überprüft werden sollte, um Produkte von dieser Liste zu streichen, die nicht länger als militärisch empfindlich angesehen werden können;
   - die Kontrollen über den Technologietransfer zwischen den einzelnen COCOM-Mitgliedern und zwischen COCOM-Mitgliedern und Drittländern, die sich zur Einhaltung der COCOM-Vorschriften verpflichten, so schnell wie möglich aufgehoben werden müssen und die Bemühungen auf COCOM-Ebene auf die ordnungsgemäße Durchführung der nach dem innerstaatlichen Recht festgelegten Kontrollen abzielen sollten;
   - für auf der COCOM-Liste stehende Produkte amerikanischer Herkunft keine zusätzliche Wiederausfuhrlizenz der USA erforderlich sein sollte, wenn sie aus COCOM-Ländern gemäß den COCOM-Vorschriften wiederausgeführt werden;

5. ist der Ansicht, daß die Kontrollen des Technologietransfers in den Ostblock ausschließlich auf der Grundlage zwischen den Verbündeten vereinbarter technischer Kriterien erfolgen sollten, was unter militärisch kritischer Technologie zu verstehen ist, und daß diese Kontrollen durch ihre einseitige und insbesondere pauschale Anwendung auf angeblich, aber nicht unbedingt erwiesenermaßen militärisch anwendbare Technologie an Wirksamkeit verloren und das Vertrauen in das System beeinträchtigt und dadurch die Einheit des Westens und die westeuropäische Wirtschaft geschädigt haben;

6. ist der Ansicht, daß Staatsbürger und juristische Personen der EWG-Mitgliedstaaten nicht ausländischen (Nicht-EWG-)Rechtsvorschriften unterworfen sein dürfen;

7. empfiehlt daher den Regierungen der Mitgliedstaaten, in Anlehnung an den britischen Protection of Trading Interests Act von 1980 nach gegenseitiger Absprache Rechtsvorschriften auszuarbeiten, um dieser Praxis entgegenzuwirken;

8. ist der Auffassung, daß der beste Schutz gegen einseitige Beschränkungen beim Technologietransfer aus den USA in einem Westeuropa besteht, das den USA auch auf technologischem Gebiet viel zu bieten hat, und daß dafür energische gemeinsame Anstrengungen der Europäischen Gemeinschaft auf dem Gebiet von Forschung und Entwicklung die erste Voraussetzung sind;

9. bekräftigt, daß das europäische Niveau auf dem Gebiet der fortschrittlichen Technologie, insbesondere Informatik, Automatisierung, Biotechnologie, Luft- und Raumfahrt, neue Werkstoffe und Telekommunikation, durch eine stärkere Zusammenarbeit im Rahmen der gemeinsamen Forschungs- und Industriepolitik verbessert werden muß;

10. fordert den Rat und die Kommission auf, gegenüber den USA all ihren Einfluß geltend zu machen, um einen Technologietransfer ohne Beschränkungen zwischen den USA und der EG zu erreichen;

11. fordert die Kommission auf, dem Parlament und dem Rat einen Vorschlag für die Grundsätze zu übermitteln, die für den Technologietransfer nach und aus Unternehmen in der Europäischen Gemeinschaft maßgeblich sind;

12. beauftragt seinen Präsidenten, diese Entschließung der Kommission und dem Rat sowie den Parlamenten der Mitgliedstaaten zu übermitteln.

TRANSLATION 1

A Resolution of the European Parliment Concerning Technology Transfer

Published in the official records of the EEC

Document # A2-99/85

The European Parliment,

--in recognition of Mr. Linkohr's report on U.S. limitation of technology transfer and its damaging effects on the industrial development of the EEC,

--and of the report of the Committee for Energy, Research and Technology,

A. in consideration that the scientific and economic programs depend on free exchange of information,

B. in consideration of the interrelatedness of U.S. and Western European Science, technology and trade, and the fact that what benefits one Western nation benefits them all,

C. knowing that the U.S. has been concerned since the 1970's about Soviet use of western military technology,

D. and that the U.S. is tightening export controls on products and technology,

E. considering that U.S. export control laws are much more extreme than those of other countries,

F. considering that more and more technology has civil as well as military uses,

G. considering that military technology can only be controlled if civil technology is controlled, and the U.S. wants to expand controls,

H. considering that the NATO allies agreed to an expanded control list and thereby obligated themselves to support this embargo,

L. considering that the use of the American list in effect puts Western Europe under an embargo for technical products which it would like to export to Eastern bloc countries, so that Western European dependence on the U.S. is heightened,

M. in the fear that the EEC will become politically more dependent because of technological dependency,

N. in the expectation that the re-export law amounts to American extraterritoriality,

O. considering that this policy adversely affects American multinational firms in Western Europe(almost all of which produce highly technical wares which cannot be exported to the Eastern bloc),

P. because European multinationals cannot deal with the Eastern bloc without fear of jeopardizing their relationships with the U.S., on which they are dependent for technology transfer for spare parts,

Q. because the U.S. laws are not preventing technology transfer to the Soviets,

R. because the general impression in Europe is that these controls have more to do with politics than trade,

the European Parliment makes the following statements:

1. The export controls hinder Western European access to American technology and go against general good neighbor policy.

2. The U.S. is the one most concerned about the consequences of undesirable Eastern bloc access to technology, but Western Europe must bear the consequences of the policies.

3. (This section points out conflict between the COCOM list and the EEC agreement, and asks member states to check the two discrepancies before the court.)

4. (This section emphasizes that the COCOM list is necessary for the prevention of military technology transfer to the East, but expresses the opinion that

--the COCOM list should be revised regularly,

--restrictions of technology transfer between COCOM member nations should be lifted,

--no further re-export licenses should be required when re-export occurs from a COCOM member according to COCOM rules.

73-935 - 0 - 1987 - 9

5. The term "military critical technology" should be defined. These controls have been applied unequally and against technology which was usable for non-military purposes. This has weakened U.S./Western European unity.

6. Citizens and members of the judiciary of EEC member states should not be subject to the laws of non-EEC nations.

7. The Parliment recommends that member nations establish laws similar to the British Protection Trading Interests Act of 1980 to combat #6 above.

8. The best way to combat one way technology transfer(to the U.S.) is to recognize that the U.S. has much to offer, and to work together to improve EEC utilization of U.S. technology.

9. The level of technology that exists in the EEC in the areas of data, automation, biotechnology, air and space travel, new raw materials and telecommunications can be raised by cooperation among EEC members.

10. Asks the Council and Commision to use all its influence to remove technolgy transfer restrictions between U.S. and EEC member nations.

11. Asks the Commission to prepare plan for technology transfer within the EEC.

12. Requests the president to present these conclusions of the Commission and the Council to the member states.

TRANSLATION 2

Article from the Sueddeutsche Zeitung, 2/14/86

by Helmut Maier-Manhart

" USA Holds a Knife to its Trading Partners"

A. The worst effect is that the American firm as well as the U.S. Government has the right to establish controls. This means, in practice, that a German company would have to expose all of its relationships with customers to American scrutiny if protected components are used. At ZVEI in Frankfurt, the fear was expressed that the use of a single highly integrated chip might set the whole process in motion.

B. Already some firms in the electronics industry are looking for other sources--for example, in Japan.

C. The restrictions make it less likely that German firms can work on SDI.

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FORTNIGHTLY MANAGER'S MONITOR

JULY 28, 1986

PRIVATIZATION

Paris/Brussels Standoff In "No Foreigners" Row

● The center-right French government's supposed free-market principles are clashing with the fear of national assets slipping into foreign hands.

Socialist President Francois Mitterrand's refusal to sign a key privatization decree on grounds of protecting national interests is unlikely to bring the government down—but the xenophobia Mitterrand has stoked up could push Prime Minister Jacques Chirac's administration into a conflict with the EEC.

Chirac has asserted that his government will neither provoke a crisis nor be deterred from implementing its electoral promises. His decision to seek parliamentary approval for privatization means that a constitutional showdown and possible dissolution of parliament by the President has been averted—although new conflicts could arise in the autumn over the 1987 budget.

Mitterrand can only delay for 15 days legislation which has been approved by parliament, and Chirac's government means to push the privatization bill through by mid-August. But the process will certainly be slower than a decree, even if the government uses the "issue of confidence" procedure to speed up debate, as it is expected to do. After passing through the National Assembly, the bill must go to the Senate, then the opposition will almost certainly refer it to the Constitutional Council. Taking the summer recess into consideration, the legislative process alone could delay the bulk of the privatization plans for up to four months.

Delays and setbacks to privatization will cause budget problems for the government, which planned to raise Ffr40 billion ($5.75 bn) next year through

continued on page 4, column 1

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STRATEGIC EXPORT CONTROLS

UK May Lead EEC Against US Hi-Tech Controls

● As US hi-tech controls begin to affect the commercial interests and freedom of British companies, the UK government is coming under increasing pressure to take action. It is unlikely to act alone, however, preferring to use its presidency of the EEC to coordinate a European response.

The whole issue of US attempts to enforce its laws on non-US-resident companies is not new. In 1980, the UK took powers in its Protection of Trading Interests Act to prevent UK companies having to comply with extraterritorial US laws. These were subsequently invoked to direct British companies not to comply with certain provisions of the US's export administration regulations (John Brown at the time of the Siberian pipeline affair); and to ban the participation of UK companies in certain US lawsuits (British Airways after the Laker Airways collapse).

Recently, however, the US administration has further tightened its Export Administration Act. As a result, a number of US computer firms with operations in the UK have had to inform their British customers that if they wish to move certain computers from one location to another, even within the UK (and even if no change of ownership is involved), they will need a license from the US Department of Commerce. British hi-tech companies seeking to export their manufactured goods are also now required to apply for a US export license if the goods contain any US-produced components.

When exporting, therefore, British companies must obtain two export licenses: one from the Department of Trade & Industry (to comply with the UK's CoCom obligations) and a second from the US Department of Commerce. The latter can take up to three months, and may, as in the case of an application by Cable & Wireless to sell telecommunications equipment to China, be rejected without explanation. Ironically, US companies were already selling precisely the same equipment to China.

UK hi-tech firms vulnerable

Indeed, as the UK government has recently discovered during its efforts to sell a Department of Energy Cray 1 supercomputer to London University, it too must seek US government approval. It is rumored that the US government has gone so far as to impose unilateral third party restraints on a number of Japanese companies and their European distributors to prevent them from supplying London University with an alternative super-computer.

With a substantial proportion of the components used in UK hi-tech manufacture coming from the US, the vulnerability of British hi-tech companies to US blacklisting for refusing to cooperate with the licensing requirements is evident. And it is this vulnerability that has put both the British hi-tech sector and the UK government in a dilemma over how best to confront the problem.

The UK government strongly rejects claims made by the US government to have jurisdiction over US goods or goods based on US technology while they are in the UK or when they are being exported from the UK. The Minister for Information Technology, Geoffrey Pattie, says that: "This government will continue to do its utmost to protect British interests, and we stand ready to support any UK company that in the course of its legitimate trading has fallen foul of US extraterritoriality." But while the UK government is prepared to take up any specific cases brought to its attention, it is well aware that many British companies would lose more from being blacklisted than they would gain from a strong defense of the UK's sovereignty.

An acid test of this "leave it to companies" policy is the proposed dispatch of US Department of Commerce inspectors to the UK to check up on British companies' suitability as "approved foreign consignees." Attaining this status would release them from the requirement to obtain individual US export licenses each time they purchase hi-tech goods from the US. While the UK government has no objection (in practice) to British companies changing their procedures to comply with the contractual requirements of their US trading partners, it draws the line at British companies "opening their books" directly to US inspectors.

In the short term, Pattie is hoping to persuade US-owned subsidiaries in the UK to "vary the terms" of the strict compliance circulars that they have sent to their UK customers. The subsidiaries' freedom to soften the US rules—to make direct inspection by the Department of Commerce unnecessary—is limited, however. IBM, for example, has confirmed that it will not withdraw its own circular.

The UK is expected to coordinate a stronger EEC position on US extraterritoriality during its presidency and is certain to receive strong backing from France. The European Parliament is also likely to advocate a tough stance in a forthcoming debate on the issue. More fundamentally, however, the UK now sees European hi-tech cooperation as the only long-term solution to the problem so as to lessen the dependence of UK companies on supplies from the US.

Will such a strategy eventually mean a decline in sales for US-sourced hi-tech products? The UK government is certainly hinting that it will. While it looks as if the US will eventually be able to enforce its current level of controls, the inevitable consequence will be a concerted effort to shift hi-tech orders toward European—and possibly Japanese—suppliers. US companies should not be surprised, therefore, when they find themselves excluded, apparently arbitrarily, from programs like Eureka and regularly lose public procurement contracts.

NATIONAL POLICY PRIORITIES

New Dutch Government Is Good News for Business

● The Dutch center-right cabinet has now come into office, with Christian Democrat Ruud Lubbers again at the helm. The new government will continue its successful moderate austerity program, and the pro-business attitude will remain unaltered.

The new cabinet is similar to the first Lubbers administration, with a few new faces. The Economics Ministry is now led by Liberal (VVD) Rudolph De Korte, while Finance remains in the hands of Christian Democrat (CDA) Onno Ruding. However, the CDA's hand has been strengthened with the addi-

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German Electrical and
Electronic Manufacturers'
Association

Zentralverband der
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Mrs. Betty Ferrell
Office of Technology
and Policy Analysis
Export Administration
U.S. Department of Commerce
P. O. Box 273

Washington, D. C. 20044

Your Ref.
Our Ref. Dr. Dulke
Date 22.8.1986

Revision of Controls on Foreign Products incorporating U.S. Origin Parts, Components, and Materials

Dear Mrs. Ferrell,

we would like to present our views on the notice of the proposed revision of § 376.12 EAR published in the Federal Register of [illegible] 1986, inviting for public comments.

ZVEI is the association of the German Electrical und Electronic Industries. It represents 1,200 electrical companies manufacturing in the Federal Republic of Germany. ZVEI member-companies using U.S. parts to a large extent and depending largely on export have a vital interest in the implications of the U.S. regulations on reexport controls. So ZVEI organized an information seminar on U.S. reexport controls, October 25, 1985, with presentations by Mr. Theodore Wu and Mr. Daniel Hill, Department of Commerce.

We are concerned that the wording of the proposed rulemaking goes beyond that of the present § 376.12 as regards extraterritorial effects. It is said, explicitly, that the Department of Commerce controls the export from abroad of foreign-made products containing U.S. origin parts: "The Department of Commerce asserts control over such incorporated commodities by placing limits on the export from abroad of the foreign-made products into which they are incorporated" and "The prior written approval of the Office of Export Licensing [illegible] is required for the export from a foreign country of a foreign-made product containing U.S. origin parts, components or materials".

If foreign-made products are intended to be placed directly under United States export controls the regulations should at least provide for a favourable treatment for COCOM-partners and should not require the same degree of control as for other countries. We would therefore propose an amendment to the regulation (a) (2) in the sense that a reexport license for the export from COCOM-countries is not required if the U.S. content value is 20 % or less, regardless of the ultimate [illegible] countries the end-products are in any case [illegible] the interests

of the United States of national security or foreign policy are assured by national licensing procedures so that additional U.S. controls lose their purpose. Therefore regulation (a) (2) should read as follows:

"If the U.S. content value is 20 % or less".

The question is, if a restriction of the 20 % rule for export to certain countries would mean that for exporting of end-products containing U.S. parts of low value to all other destinations, a license is required. Such a ruling would not be practicable.

For the calculation of values, described in clause (c) the U.S. content value and the foreign-made product value should be based on costs or prices excluding value-added or excise taxes. For a fair and equal treatment taxes which vary considerably from country to country should be eliminated from costs as well as selling price.

Finally, we come to the conclusion that the costs for export controls resulting from the United States Export Control Regulations for foreign products jeopardize the partly existing price advantages for American parts and components in comparison to products from other countries, for instance Japan. The foreign competitiveness of U.S. products is thus reduced so that it will become more and more interesting for German companies to buy products from other countries.

We hope that our above comments may find your consideration.

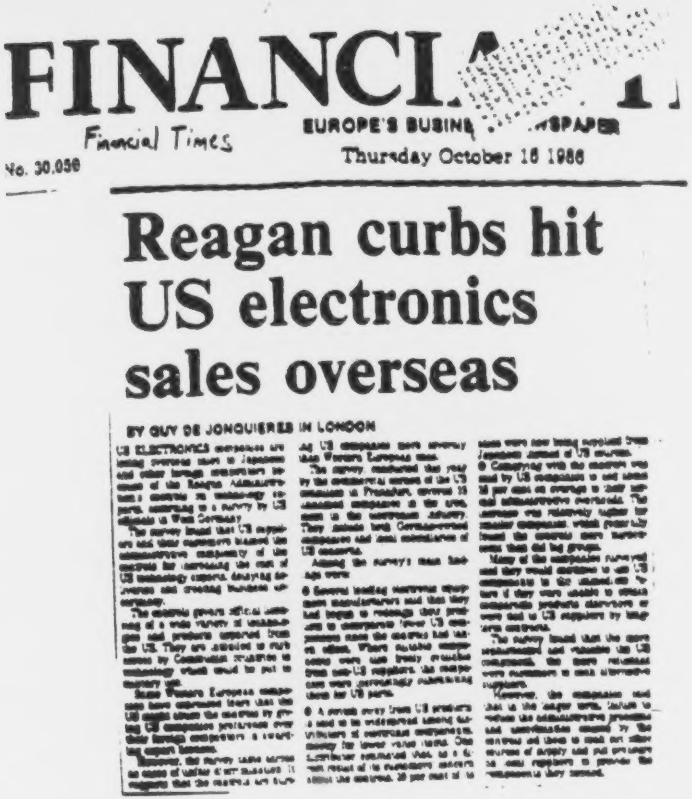
Sincerely yours

ZENTRALVERBAND ELEKTROTECHNIK-
UND ELEKTRONIKINDUSTRIE e. V.

The Management

Düssel

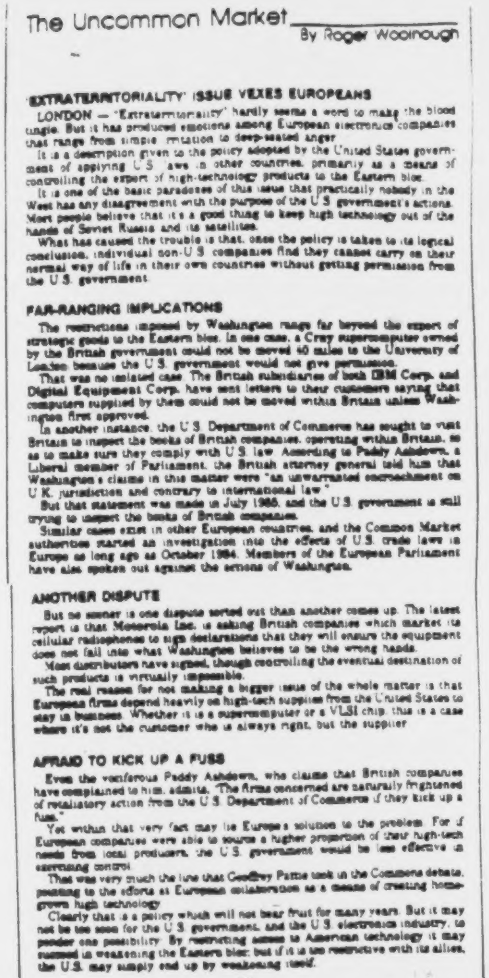
Dr. Bottcher Dr. Dussel



FINANCI[illegible]
EUROPE'S BUSIN[illegible]WSPAPER
Financial Times
No. 30,036
Thursday October 16 1986

Reagan curbs hit US electronics sales overseas

BY GUY DE JONQUIERES IN LONDON



The Uncommon Market

By Roger Woolnough

'EXTRATERRITORIALITY' ISSUE VEXES EUROPEANS

LONDON — 'Extraterritoriality' hardly seems a word to make the blood tingle. But it has produced emotions among European electronics companies that range from simple irritation to deep-seated anger.

It is a description given to the policy adopted by the United States government of applying U.S. laws in other countries, primarily as a means of controlling the export of high-technology products to the Eastern bloc.

It is one of the basic paradoxes of this issue that practically nobody in the West has any disagreement with the purpose of the U.S. government's actions. Most people believe that it's a good thing to keep high technology out of the hands of Soviet Russia and its satellites.

What has caused the trouble is that, once the policy is taken to its logical conclusion, individual non-U.S. companies find they cannot carry on their normal way of life in their own countries without getting permission from the U.S. government.

FAR-RANGING IMPLICATIONS

The restrictions imposed by Washington range far beyond the export of strategic goods to the Eastern bloc. In one case, a Cray supercomputer owned by the British government could not be moved 40 miles to the University of London because the U.S. government would not give permission.

That was no isolated case. The British subsidiaries of both IBM Corp. and Digital Equipment Corp. have sent letters to their customers saying that computers supplied by them could not be moved within Britain unless Washington first approved.

In another instance, the U.S. Department of Commerce has sought to visit Britain to inspect the books of British companies, operating within Britain, so as to make sure they comply with U.S. law. According to Paddy Ashdown, a Liberal member of Parliament, the British attorney general told him that Washington's claims in this matter were "an unwarranted encroachment on U.K. jurisdiction and contrary to international law."

But that statement was made in July 1985, and the U.S. government is still trying to inspect the books of British companies.

Similar cases exist in other European countries, and the Common Market authorities started an investigation into the effects of U.S. trade laws in Europe as long ago as October 1984. Members of the European Parliament have also spoken out against the actions of Washington.

ANOTHER DISPUTE

But no sooner is one dispute sorted out than another comes up. The latest report is that Motorola Inc. is asking British companies which market its cellular radiophones to sign declarations that they will ensure the equipment does not fall into what Washington believes to be the wrong hands.

Most distributors have signed, though controlling the eventual destination of such products is virtually impossible.

The real reason for not making a bigger issue of the whole matter is that European firms depend heavily on high-tech supplies from the United States to stay in business. Whether it is a supercomputer or a VLSI chip, this is a case where it's not the customer who is always right, but the supplier.

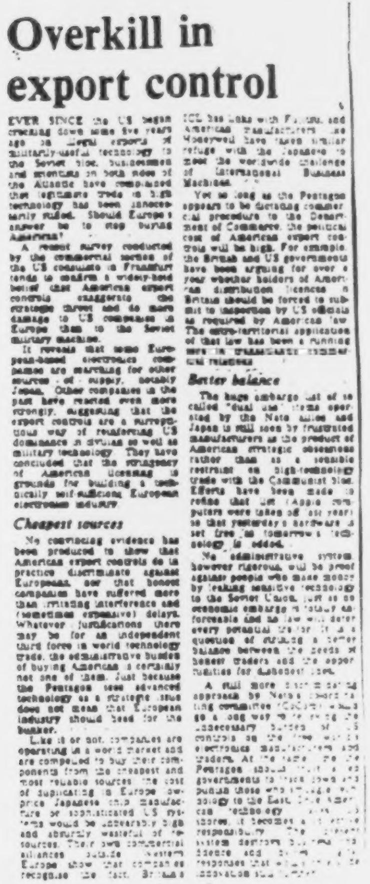
AFRAID TO KICK UP A FUSS

Even the vociferous Paddy Ashdown, who claims that British companies have complained to him, admits, "The firms concerned are naturally frightened of retaliatory action from the U.S. Department of Commerce if they kick up a fuss."

Yet within that very fact may lie Europe's solution to the problem. For if European companies were able to source a higher proportion of their high-tech needs from local producers, the U.S. government would be less effective in exercising control.

That was very much the line that Geoffrey Pattie took in the Commons debate, pointing to the efforts at European collaboration as a means of creating home-grown high technology.

Clearly that is a policy which will not bear fruit for many years. But it may not be too soon for the U.S. government, and the U.S. electronics industry, to ponder one possibility. By restricting access to American technology it may succeed in weakening the Eastern bloc; but if it is too restrictive with its allies, the U.S. may simply end up by weakening itself.



Overkill in export control

EVER SINCE the US began cracking down some five years ago on illegal exports of militarily-useful technology to the Soviet bloc, businessmen and scientists on both sides of the Atlantic have complained that legitimate trade in high technology has been unnecessarily stifled. Should Europe's answer be to stop buying American?

A recent survey conducted by the commercial section of the US consulate in Frankfurt tends to confirm a widely-held belief that American export controls exaggerate the strategic threat and do more damage to US companies in Europe than to the Soviet military machine.

It reveals that some European-based electronics companies are searching for other sources of supply, notably Japan. Other companies in the past have reacted even more strongly, suggesting that the export controls are a surreptitious way of reinforcing US dominance in civilian as well as military technology. They have concluded that the stringency of American licensing is grounds for building a technically self-sufficient European electronics industry.

Cheapest sources

No convincing evidence has been produced to show that American export controls do in practice discriminate against Europeans, nor that honest companies have suffered more than irritating interference and (sometimes expensive) delays. Whatever justifications there may be for an independent third force in world technology trade, the administrative burden of buying American is certainly not one of them. Just because the Pentagon sees advanced technology as a strategic issue does not mean that European industry should head for the bunker.

Like it or not, companies are operating in a world market and are compelled to buy their components from the cheapest and most reliable sources. The cost of duplicating in Europe low-price Japanese chip manufacture or sophisticated US systems would be unbearably high and absurdly wasteful of resources. Their own commercial alliances outside Western Europe show that companies recognise the fact. Britain's ICL has links with Fujitsu, and American manufacturers like Honeywell have taken similar refuge with the Japanese to meet the worldwide challenge of International Business Machines.

Yet so long as the Pentagon appears to be dictating commercial procedure to the Department of Commerce, the political cost of American export controls will be high. For example, the British and US governments have been arguing for over a year whether holders of American distribution licences in Britain should be forced to submit to inspection by US officials as required by American law. The extra-territorial application of that law has been a running sore in transatlantic commercial relations.

Better balance

The huge embargo list of so called "dual use" items operated by the Nato allies and Japan is still seen by frustrated manufacturers as the product of American strategic obsessions rather than as a sensible restraint on high-technology trade with the Communist bloc. Efforts have been made to refine that list (Apple computers were taken off last year) so that yesterday's hardware is set free as tomorrow's technology is added.

No administrative system, however rigorous, will be proof against people who make money by leaking sensitive technology to the Soviet Union, just as no economic embargo is totally enforceable and no law will deter every potential traitor. It is a question of striking a better balance between the needs of honest traders and the opportunities for dishonest ones.

A still more discriminating approach by Nato's Coordinating committee (CoCom) would go a long way to relieving the unnecessary burden of US controls on the free world's electronics manufacturers and traders. At the same time the Pentagon should trust allied governments to track down and punish those who smuggle technology to the East. Once American technology leaves US shores, it becomes a collective responsibility. The present system destroys business confidence and [illegible] responses that [illegible] innovation and [illegible].

Financial Times
20 Oct 86
1/2

APPENDIX

AEA ADMINISTRATIVE AND LEGISLATIVE PROPOSALS FOR EXPORT CONTROL IMPROVEMENTS

"The serious competitive problems faced by U.S. electronics companies in the international marketplace resulting from current U.S. export controls, requires that administrative and legislative improvements in the export control system be made...The U.S. must focus its controls on truly critical commodities-in effect, place higher fences around fewer items."

Statement of Herbert M. Dwight
CEO, Spectra-Physics, Inc.
Before the
House Subcommittee on International Trade
March 12, 1987

AEA ADMINISTRATIVE PROPOSALS FOR LICENSING IMPROVEMENTS

I. Fully implement the letter and intent of the Export Administration Act, as amended in 1985.

o Resolving Interagency Disputes

Action Item

The National Security Council, on behalf of the President, should create and implement a procedure in which interagency differences can be rapidly resolved within statutory time frames. When time frames do not appear in law, they should be created administratively. Two separate management mechanisms should be created: one for making licensing decisions and another for adding and deleting items from the control list.

o Decontrol of Low-Level Technology

Action Item

Expand G-COM coverage to all AEN items, and publish regulations that facilitate the accurate determination of which items do not require licenses for COCOM exports(or in the future all free world exports) for all ECCN's.

Implement a procedure that requires unnecessary applications be returned to the exporter with the notification that the application is unnecessary.

o List Review

Action Item

The Commerce Department(with the cooperation of other agencies as appropriate) should implement a procedure whereby a truly meaningful list review takes place in which lower level items are removed each year through indexing. As part of the indexing procedure, new items should be made eligible for bulk licenses. As a first step toward streamlining the control list, broad categories of low level goods(such as COCOM national discretion items) should be decontrolled immediately to make up for years of neglecting this provision.

o Replacement Parts

Action Item

The Executive Branch should implement the replacement provision immediately for items controlled only for national security reasons pending the resolution of foreign policy questions. The appropriate government officials should request that Congress provide a statutory clarification of its intent if needed to resolve the question.

II. Provide the Department of Commerce with the financial resources to properly execute the law.

o Pay Scales

Action Item

The Office of Management and Budget and the Department of Commerce should immediately increase salaries of Commerce Department employees to levels that exist for comparable jobs in the Department of Defense.

o Automation

Action Item

The Commerce Department should hire an outside consultant to identify weaknesses in the export control process and recommend additional ways to automate. OMB should provide in the Commerce Department budget the funds to pay for the study and implement the consultant's recommendations.

III. Other Measures to Improve Competitiveness.

o Trade Shows

Action Item

U.S. exporters should be permitted to demonstrate products at trade shows provideed the product is returned to the U.S. afterwards if it cannot be approved for sale.

o Complexity of the Export Administration Regulations(EAR)

Action Item

The Department of Commerce should hire an outside public relations consultant to examine the current EAR. The firm should present several completely rewritten forms of the EAR incorporating changes in style, format, and specific language with the aim of making the EAR as clear, accurate and succinct as possible. The new EAR should include all existing provisions as well as "in house" guidelines.

o Responsiveness to West Coast Exporters

Action Item

The Department of Commerce should establish a procedure for processing certain routinely processed categories of license applications on the West Coast in either existing Commerce Department offices or in a new office. In addition, license application forms should be modified to allow exporters to request return by overnight courier at the exporter's expense.

IV. Implementation of AEA Legislative Proposals

Action Item

Implement administratively AEA's legislative recommendations for improving the export control system.

AEA LEGISLATIVE PROPOSALS FOR LICENSING IMPROVEMENTS

REEXPORT CONTROLS

(a) Eliminate reexport controls on U.S. products reexported to, within or among COCOM or 5(k) countries, but provide an exception for high-level goods not eligible for bulk licensing.

(b) Eliminate reexport controls on U.S.-origin parts and components contained in foreign products to be exported to countries other than COCOM or 5(k) when the parts and components constitute 20 percent or less in value of the product.

(c) Amend the description of a general license to include reexports under such license of U.S.-origin goods.

DECONTROL LOW LEVEL ITEMS

(a) Extend the G-COM procedures (decontrol of technology below AEN level) for exports (and reexports) to all free world countries.

(b) For exports to COCOM and 5(k) countries, raise the G-COM level to the PRC green line level, thereby decontrolling exports of technology below this level to these countries.

FOREIGN AVAILABILITY

(a) Require that the uncontrolled availability of goods and technology in free world countries be sufficient grounds for making a foreign availability determination.

(b) Require the Secretary of Commerce to license exports (without the possibility of a Presidential veto) to any free world destination if the end user can obtain the item from another source.

PUBLISHING FOREIGN AVAILABILITY ALLEGATIONS

Require the Secretary of Commerce to acknowledge the receipt of foreign availability allegations from industry and publish in the Federal Register within 30 days the action the Secretary has taken on the allegation. Allow a maximum of seven months for the Secretary to make a decision.

DISTRIBUTION LICENSE

Permit use of a distribution-type license for certain exports to the People's Republic of China.

INDUSTRY REPRESENTATIVE TO COCOM

Require that the U.S. delegation to COCOM control list meetings include (either officially or unofficially) representatives of U.S. industry who are knowledgeable about the items being reviewed.

UNILATERAL CONTROLS

Require the Secretary of Commerce to review, on an annual basis, all U.S. unilateral controls, to delete those that are no longer appropriate, and to publish a list of remaining controls in the Federal Register together with a specific justification for each control. In addition, require the Secretary to report to Congress on the steps being taken to achieve multilateral status for the remaining unilateral controls.

TECHNICAL ADVISORY COMMITTEES

Require that TAC chairpersons present the TAC's findings in the interagency review process and report to the TAC the actions that are taken on the TAC's recommendations and the reasons for those actions.

GOODS CONTAINING MICROPROCESSORS

Clarify the existing provision in law regarding the decontrol of certain goods containing embedded microprocessors to fully implement the intent of Congress. Expand the provision to include other embedded components.

NEGOTIATIONS WITH OTHER COUNTRIES

Establish the following U.S. objectives for negotiating multilateral and bilateral agreements:

(a) Create an export/reexport license-free zone within COCOM and other cooperating countries by 1990;

(b) Raise the national discretion level for low-level technology exports to free-world countries;

(c) Raise the green line level for exports to the PRC.

Soviet Acquisition of Militarily Significant Western Technology: An Update

September 1985

In recent years, the United States Government has learned of a massive, well-organized campaign by the Soviet Union to acquire Western technology illegally and legally for its weapons and military equipment projects. Each year Moscow receives thousands of pieces of Western equipment and many tens of thousands of unclassified, classified, and proprietary documents as part of this campaign. Virtually every Soviet military research project—well over 4,000 each year in the late 1970s and over 5,000 in the early 1980s—benefits from these technical documents and hardware. The assimilation of Western technology is so broad that the United States and other Western nations are thus subsidizing the Soviet military buildup.

Western products and technology secrets are being systematically acquired by intricately organized, highly effective collection programs specifically targeted to improve Soviet military weapon systems. The Soviet intelligence services—the KGB, the GRU, and their surrogates among the East European services—and Soviet trade and scientific organizations are actively involved in obtaining this technology. Targets include defense contractors, manufacturers, foreign trading firms, academic institutions, and electronic data bases. Only recently has the full extent of illegal Soviet technology collection efforts become known.

The purpose of this paper is to reveal in detail the structure of these Soviet programs, and to give examples of Soviet requirements and successes. Understanding the Soviet effort is a critical first step in protecting Western technology and preventing it from being turned against the West.

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Soviet Acquisition of Militarily Significant Western Technology: An Update

Introduction

Overcoming considerable technological inferiority over the past several decades, the Soviets have built the largest military industrial manufacturing base in the world and a massive research establishment to complement it. Their objective is to achieve military-technical capabilities that are at least equal, if not superior, to those of the West.

Their resource commitment is enormous by any measure; it has enabled them in recent years to narrow the Western lead in nearly all key technological areas, particularly microelectronics. In materials, explosive, and sensor technologies applicable to deployed tactical forces such as tanks, artillery, and antitank and surface-to-air missiles the Soviets' technology level is roughly equal to or slightly better than that of the West. They are the world's leaders in a few significant fields, such as chemical warfare and in some areas of laser research for future "star wars" applications.

Nevertheless, in spite of the several decades of massive investment in indigenous research and development, the prospects are small that the Soviets can reduce their dependence on a large variety of Western products and technology in this decade and the next without allowing the technological gap to widen. The main reasons for this continuing need are endemic to the Soviet system: the lack of adequate incentives, inflexible bureaucratic structures, excessive secrecy, and insularity from the West. Even if there were some major Soviet economic or managerial reforms, *no real lessening of the Soviet dependence on Western innovation is anticipated* as long as the USSR perceives the need for military-technological parity with the West, or the need for superiority.

The impact of this dependence could be even more important in the 1990s than it is today. The USSR has been compelled to follow Western direction in technological change, and thus far it has been able to do this satisfactorily because of a mature technological base. The next decade is less certain for the Soviets, however, because of new technological leadership that the West has supplied them. Their dependence is essentially for *innovation*—where they will continue to look to the West—not for maintaining *adequacy*, which they have achieved in nearly all important military technologies. *But today's adequacy will be tomorrow's obsolescence if technology fails to keep pace.*

In May 1982 the US Congress was given a report[1] identifying a massive and global Soviet program to acquire Western militarily significant technology.[2] That report described the Soviets' successes in supplementing their military research and manufacturing capabilities and in narrowing the technology gap with the West, thereby eroding the technological superiority on which US and Allied security depends.

The identification of this Soviet program led the West to undertake greater efforts in counterintelligence and export control. Since then, it has become even more evident that the magnitude of the Soviets' collection effort and their ability to assimilate collected equipment and technology are far greater than was previously believed.

This update of the 1982 report defines the scope of the Soviet effort. It outlines how the Soviets go about acquiring Western technology and identifies examples of specific technologies they seek. It highlights details and statistics of Soviet successes—much more detail than could be revealed previously. This information was obtained directly by the United States and Allied countries. Understanding the Soviet effort is critical in designing ways to protect Western technology from being acquired and used against Western security interests.

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[1] *Soviet Acquisition of Western Technology.* April 1982. Exhibit No. 1. Hearings Before the Permanent Subcommittee on Investigations of the Committee on Governmental Affairs, United States Senate, Ninety-Seventh Congress, Second Session, 4, 5, 6, 11, and 12 May 1982.

[2] Western technology (hardware, documents, and know-how) includes that of Japan as well as other Free World countries.

Soviet Motivations

A basic question is why do Soviet weapon designers and Soviet manufacturers need to copy design concepts embodied in Western equipment and associated documents? In general, Soviet weapons have historically reflected a commitment to functional designs that can be easily manufactured in labor-intensive factories and readily maintained in the field with a minimum of technical skill. There has always been a struggle between Soviet design simplicity and technical complexity. Soviet weapon designers have not had to face the competitive pressures that drive Western designers to press the state of the art.

Building on a mature research sector and on lessons learned from past performances of weapons in battle, the Soviets are placing more of a premium on technically complex systems. Western system and equipment characteristics increasingly are used as yardsticks against which Soviet technical capabilities are judged. Every major civilian or military project is compared with the best Western technology before it is approved for development. Once in development, Soviet standards mandate the comparison of the quality and technical level of hardware, at different design stages, with foreign counterparts.

With their access to many details of Western weapons and dual-use equipment designs and concepts, Soviet designers are, in effect, competing with Western designers. That competition, supported and encouraged by the Soviet leadership, is probably pressuring the military research establishment to pay increasing attention to technically complex systems. Countervailing pressures for design simplicity are being applied by the manufacturing sector, which is less responsive in adapting to technological change. All of these forces indicate continuing Soviet programs to acquire Western military and dual-use hardware and technical data.

Overview of Two Soviet Programs

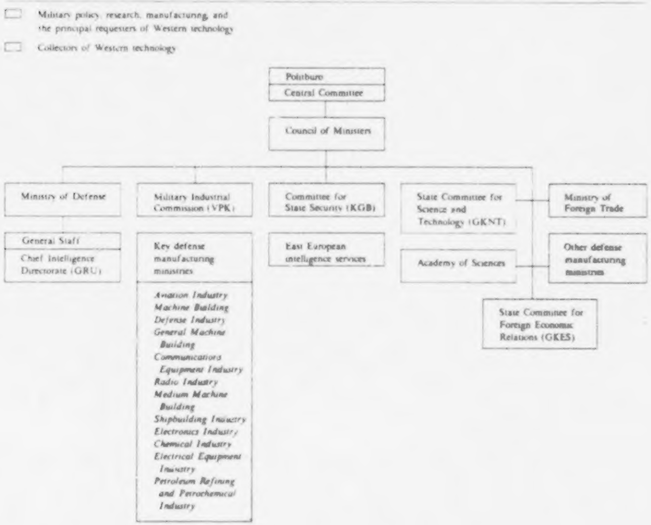
Since 1982 it has become clearer that the Soviets have two programs to acquire Western hardware and documents.

- First, Moscow has a program to raise the technical levels of weapons and military equipment as well as to improve the technical levels of manufacturing processes. This program is managed by the most powerful organization in defense production—the Military Industrial Commission (VPK) of the Presidium of the Council of Ministers (figure 1). Mainly, although not exclusively, through intelligence channels, the VPK seeks one-of-a-kind military and dual-use hardware, blueprints, product samples, and test equipment to improve the technical levels and performance of Soviet weapons, military equipment, and defense manufacturing equipment and reduce any dependency on advanced Western products. This is done in large part by exploiting and adapting design concepts embodied in acquired equipment and associated documents.
- Second, the Ministry of Foreign Trade and Soviet intelligence services administer a trade diversion program to acquire relatively large numbers of dual-use manufacturing and test equipment for direct use in production lines. This program seeks export controlled microelectronics, computer, communications, machining, robotics, diagnostic, and other equipment to increase the throughput of weapon-producing industries.

These two programs, which apparently are administered separately, are the hub of the Soviet effort.

The VPK program is principally, but not exclusively, an industrial security and counterintelligence concern for the West. It involves espionage by hostile intelligence officers, overt collection by Bloc officials, acquisition by scientific exchange program participants, and illegal trade-related activity. The trade diversion

Figure 1
Key Organizations Involved in Managing Military Research and Manufacturing and the Acquisition of Western Technology


Military policy, research, manufacturing, and the principal requesters of Western technology
Collectors of Western technology
Politburo
Central Committee
Council of Ministers
Ministry of Defense
General Staff
Chief Intelligence Directorate (GRU)
Military Industrial Commission (VPK)
Key defense manufacturing ministries
Aviation Industry
Machine Building
Defense Industry
General Machine Building
Communications Equipment Industry
Radio Industry
Medium Machine Building
Shipbuilding Industry
Electronics Industry
Chemical Industry
Electrical Equipment Industry
Petroleum Refining and Petrochemical Industry
Committee for State Security (KGB)
East European intelligence services
State Committee for Science and Technology (GKNT)
Academy of Sciences
Ministry of Foreign Trade
Other defense manufacturing ministries
State Committee for Foreign Economic Relations (GKES)

The Military Industrial Commission (VPK) coordinates the development of all Soviet weapons as well as the Soviet national-level program to acquire Western technology. The VPK is the most powerful organization in the defense-research establishment, comprising the top executives of the key defense manufacturing ministries (industries). Requests for Western documents and one-of-a-kind hardware from military equipment designers in each of the 12 industries shown above are called requirements (see figure 2).

To satisfy these requirements, the VPK controls a national fund, amounting to some half a billion rubles each year (roughly $1.4 billion in 1980 purchase power equivalents). Once approved by the VPK, requirements are selectively levied among the KGB, the GRU, and at least four other national-level collection agencies, as well as surrogates among the East European intelligence services.

The State Committee for Science and Technology (GKNT) acts as a collector and as the central processor for the national-level program. It also monitors the absorption and assimilation of Western technology by the defense industries.

program principally involves export control and international compliance issues. Characteristics of these programs overlap, further complicating the design of adequate countermeasures:

- Both programs sometimes seek the same products.
- Soviet industrial ministries request technology and equipment through both programs.
- The collection channels overlap and in some cases the same Soviet individuals (intelligence officers and others) are involved in each program.

The VPK Program: Raising the Technical Levels of Weapons and Manufacturing Equipment

The VPK includes the top executives of most of the key Soviet defense manufacturing ministries shown in figure 1. Full VPK membership is given to the Ministers of Aviation, Machine Building (projectiles and explosives), Defense Industry (armor and electro-optics), General Machine Building (strategic missiles and space), Communications Equipment, Radio (radars and large-scale computers), Medium Machine Building (nuclear weapons and high-energy lasers), Shipbuilding, and Electronics. It is a small but powerful group, responsible for centrally overseeing the research, development, and production of all Soviet weapon systems. It coordinates developments between its chief customer, the Ministry of Defense, and the key suppliers, the defense-industrial ministries. As the expediter for weapons development projects, *it is the principal Soviet military instrument for eliminating or circumventing the inefficiencies characteristic of the Soviet economic system.*

As part of its responsibility to enforce schedules and to ensure that technical and performance specifications are met, the VPK translates requests for Western hardware and documents, principally by the design bureaus of 12 industries (figure 1), into lists of collection requirements. In the late 1970s alone about one-half billion rubles (roughly $1.4 billion in 1980 purchase power equivalents) each year was reserved for purchases of one-of-a-kind Western hardware and documents.

Three examples of specific requirements from the VPK lists are shown in figure 2. The first deals with the IBM 370 computer, used by the Soviets as the model for production of their own version, "Ryad," which is a copy of the IBM 370 architecture and functions. The second deals with a cruise missile computer. The VPK apparently assigned it a high priority because of major efforts under way at that time to develop long-range strategic cruise missiles, which require large-capacity digital memories for onboard navigation. The Soviets historically have had reliability and other problems in developing such computers. The third example is a US Fairchild Instrument Corporation/Xincom semiconductor memory tester. It is a good example of the one-of-a-kind dual-use product requested and acquired through the VPK program. Design concepts embodied in the hardware and associated documentation of the tester were copied to develop a Soviet counterpart. The original tester also could be used to help copy or reverse-engineer Western integrated circuits.

Requirements for documents alone can command amounts as considerable as hardware; examples include over 50,000 rubles (roughly $140,000 in 1980 purchase power equivalents) for documents on the US shuttle orbiter control system and over 50,000 rubles for high-energy laser developments. Over 200,000 rubles ($560,000) was approved for acquiring selected research documents on US antimissile defense concepts.

Each year the VPK publishes a report based on the evaluation of the individual ministries. It includes aggregate statistics on numbers of technical documents and samples (hardware) obtained, gross ruble savings, and the numbers and priority of requirements satisfied. This report is sent to the Chairman of the Presidium of the Council of Ministers and to the Central Committee of the Communist Party. Copies also are sent to headquarters elements of the collection organizations.

Figure 2
Examples of VPK Requirements, Mid 1970s - Early 1980s

Mid 1970s

Requester (responsible for producing mainframe computers)	1	Ministry of the Radio Industry
Desired technology	2	Technical documentation on IBM 370 computer models 145, 158, 168 and operating system data, not earlier than 1974. Information about new IBM projects
Organization charged with collection	3	KGB
Origin or location of technology	4	US. Documents from the IBM firm

Late 1970s

Joint requirement. Priority code A-1 indicates technology needed for potential solutions of a problem in producing a future weapon system	1	Ministries of Aviation, Communications Equipment, and Electronics Industries. A-1, Most Critical
Desired technology	2	Electronic components and programing devices for cruise missile digital computer memory. Samples and documents desired
Maximum funds allocated for collection of this item	3	170,000 rubles
Organization charged with collection	4	KGB

Early 1980s

Code B-1 indicates substantial reduction in time and expenditure in production of new weapons	1	Ministry of the Electronics Industry. B-1
Desired technology	2	Xincom monitoring and metering equipment for static and functional testing of semiconductor memory units. Sample and documents desired
Maximum funds allocated for collection of this item	3	4,500,000 rubles
A nonintelligence organization also charged with assisting collection	4	Ministry of Foreign Trade. KGB

The mid-1970s VPK requirement shown above targets IBM equipment for Soviet military research and development. The Soviets copied the architecture of the IBM 360 and 370 systems to develop their Ryad series of computers. The late 1970s requirement is a very high priority for three reasons: it is identified as "most critical"; it is needed to solve problems in producing a *future* weapon system; and *three* ministries would benefit technically, economically, and jointly from its acquisition. The early 1980s requirement, for a Fairchild/Xincom semiconductor memory test system, is a perfect example of the one-of-a-kind dual-use product (sample) and associated documentation requested for copying as well as for volume purchases for direct use in production lines. This tester was in fact acquired, and design concepts were copied, saving several hundred man-years of Soviet developmental effort.

Soviet requirement data also include the firms and sometimes the names of persons who have the desired hardware and documents. Some 3,000 to 5,000 new, amended, and reapproved requirements for hardware, documents, or both are now issued by the Soviets each year.

Table 1
Summary of Results of the VPK Program, Late 1970s and Early 1980s

- An average of over 5,000 Soviet military equipment and weapon system research projects per year in the early 1980s benefited from Western hardware and technical documents. Over half of these projects were in the electronics and the armor and electro-optics industries.
- Innovation, new concepts, new directions, higher technical levels of research, accelerated development of more advanced weapons, and the avoidance of major pitfalls are some of the key benefits to Soviet military scientific research projects.
- In the early 1980s more than 3,500 requirements were levied each year for specific Western hardware, documents, or both, with roughly one-third satisfied each year, the other two-thirds still targeted.
- Some half a billion rubles are maintained each year for potential collections against these requirements (roughly $1.4 billion in 1980 purchase power equivalents).
- During the 10th Five-Year Plan (1976-80), over 3,500 requirements were fully satisfied worldwide—roughly 60 to 70 percent of these being fulfilled by the Soviet intelligence services (the KGB and the GRU) and surrogates among the East European intelligence services. Requirements fully satisfied during the 11th Five-Year Plan will exceed 5,000.
- Of the 3,500 satisfied requirements approximately 5 to 10 percent were judged by the Soviets as the most significant to military research projects. The Soviet intelligence services and surrogates among the East European services fulfilled about 90 percent of these most significant requirements each year.
- About half of all VPK requirements fulfilled in the 10th Five-Year Plan (1976-80) and thus far in the 11th Five-Year Plan (1981-85) were for two industries: electronics and communications equipment.
- About 60 percent of that portion of document and hardware acquisitions considered to be the most significant to the Soviets was of US origin, although not necessarily collected in the United States.
- About 70 percent of the documents and hardware acquired in the 10th and so far in the 11th Five-Year Plans, which were judged by the Soviets to be the most significant to their military research projects, probably were export controlled, embargoed, classified, or under some control by Western governments.
- About 50 percent of the 6,000 to 10,000 pieces of hardware acquired annually and 20 percent of the 100,000 documents acquired annually are used by the Soviets in transferring Western technology into their military research projects.
- In the late 1970s about 700 embargoed dual-use manufacturing, diagnostic instrumentation, and other dual-use products were acquired each year for copying embodied designs, reverse-engineering, and probably for selected direct use as key equipment in Soviet military production lines.
- From 1976 to 1980 the greatest savings in research project costs, almost one-half billion rubles (the 1980 dollar cost of equivalent research activity would be $800 million), were realized by two ministries—the Ministry of the Defense Industry (armor and electro-optics) and the Ministry of the Aviation Industry. The Soviet manpower equivalence of these savings alone translates roughly into over 100,000 man-years of scientific research. These savings, however, may be biased. The ruble figures probably reflect operating costs—salaries, bonuses, and sometimes savings in elimination of, for example, test range activity, but not capital costs. Although Soviet managers generally tend to inflate savings to enhance their role, the savings estimated in the VPK program appear to be conservative.

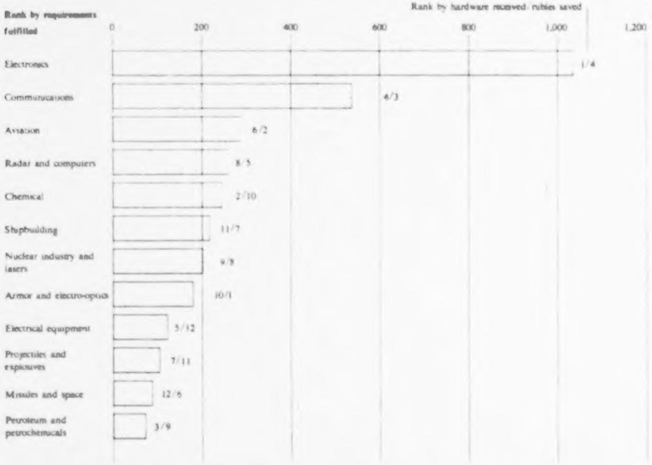
Successes and Benefits

The VPK program is a Soviet success story (table 1). Over 3,500 specific collection requirements for hardware and documents were satisfied for the 12 industrial ministries for just the 10th Five-Year Plan (1976-80). About 50 percent of more than 30,000 pieces of Western one-of-a-kind military and dual-use hardware and about 20 percent of over 400,000 technical documents collected worldwide in response to these requirements were used to improve the technical performance of very large numbers of Soviet military equipment and weapon systems. The benefits and distribution by industry of the fulfilled requirements are shown in figure 3.

According to the Soviets, about one-third of the VPK requirements are totally or partially fulfilled annually, strongly suggesting that Western industrial security, counterintelligence, export controls, and other efforts do have an effect. But each year the number of VPK requirements grows by about 15 percent. This is a strong indication that the expanding Soviet military industrial program continues to rely on Western technical solutions and advances. It also indicates increased collection success and user expectation.

Figure 3
Rank Ordering of Soviet Industries by VPK Requirements Fulfilled, by Hardware Received, and by Rubles Saved, 1976-80

Number of requirements for Western documents, hardware, or both



About 50 percent of the VPK requirements that were fulfilled during the 10th Five-Year Plan for Western hardware and documents were satisfied on behalf of two defense industries—electronics and communications. These are key areas where the Soviets' need for militarily significant technology and the West's need for better controls are greatest.

The four industries receiving the most Western military hardware and dual-use products were electronics (over 6,000 pieces of equipment, a large percentage involving microelectronics), chemical (almost 4,000 pieces), petroleum/petrochemicals (over 1,500), and communications (over 1,500), ranked in that order.

The top four industries saving the most rubles in research project development costs in terms of manpower and other resources were the armor and electro-optics industry (almost 20 percent of the 1.4 billion rubles saved in research project costs) and the aviation, communications, and electronics industries. These four industries consistently appear to be the Soviet leaders in requesting, absorbing, and generally getting the most use out of Western hardware and documents. In some cases, such as in the armor area, the Soviets are using Western technology not to catch up, but to enhance a capability that already is equal to or better than that of the West.

Five Years Gained in Developing the Next Generation of Fire-Control Radars for Soviet Fighter Aircraft

The Soviets estimated that by using documentation on the US F-18 fighter their aviation and radar industries saved some five years of development time and 35 million rubles (the 1980 dollar cost of equivalent research activity would be $55 million) in project manpower and other developmental costs. The manpower portion of these savings probably represents over a thousand man-years of scientific research effort and one of the most successful individual exploitations ever of Western technology.

The documentation on the F-18 fire-control radar served as the technical basis for new lookdown/shootdown engagement radars for the latest generation of Soviet fighters. US methods of component design, fast-Fourier-transform algorithms, terrain mapping functions, and real-time resolution-enhancement techniques were cited as key elements incorporated into the Soviet counterpart.

Moreover, F-18 and F-14 documentation served as the impetus for two long-term research projects to design from scratch a new radar-guided air-to-air missile system. The documentation also was instrumental in formulating concrete specifications to develop new Soviet airborne radar countermeasures equipment against the F-18 and F-14.

Significant acquisitions of Western technology include documents on fire-control radars for the F-14, F-15, and F-18 and documents on US ballistic missile defense concepts (table 2). In terms of broad defense programs, Soviet strategic missiles, air defense, tactical forces, and weapons manufacturing capabilities have benefited the most from the VPK program. The annex has several hundred examples of specific Soviet weapons and military equipment benefiting from Western technology.

Western technology collected each year in the late 1970s and early 1980s aided Soviet military industries principally in four ways. Ranked by priority, the VPK program:

- Redirected Soviet technical approaches in about a hundred projects each year for ongoing weapon systems and key military equipment, or resulted in the improvement of the weapons manufacturing processes.
- Initiated several hundred new short-term and long-term research projects each year on technical topics that had not been under consideration.
- Raised the technical levels of several thousand developmental projects each year involving military equipment, manufacturing, or design procedures.
- Eliminated or shortened phases of more than a thousand military research projects each year. This contributed to a substantial reduction—in a number of cases, two to three years—in time needed to produce more technically advanced weapons and military equipment.

The benefits vary from project to project. Western technology has assisted the Soviets in reducing their weapon acquisition cycle by up to two years for research projects in an advanced status. Acquisition of Western documents, for example, helped the Soviets cut by two years the time spent on researching a new generation of fuzes for munitions with a large kill radius and for self-aiming aviation cluster munitions. For projects in an earlier stage of research, the cycle can be reduced as much as five years. This considerably shrinks overall research time, reduces the amount of resources devoted to weapon system research, and allows diversion of those resources to other Soviet military research projects.

A wide range of Soviet data demonstrates that benefits to military research projects have increased significantly from the late 1970s to the early 1980s (figure 4) and have applied to thousands of research projects in all key defense industries. Measured in rubles, the

Table 2
Selected Worldwide Soviet Acquisitions, Military Applications, and Collectors of Western Documents, Military Hardware, and Dual-Use Products

Western Technology Acquired	Soviet Application/Improvement	Collector
Strategic Missiles		
Documents on Cruise Missiles Using Radar Terrain Maps	Cruise Missile Guidance	KGB, GRU
Documents on Heat Shielding Material for Reentry Vehicles	Ballistic Missile Warheads	KGB, GRU
Documents on Ballistic Missile Defense Concepts	Future Ballistic Missile Defense	KGB, GRU
Air Defense		
F-14, F-15, F-18 Documents on Fire-Control Radars	Four Soviet Fighter Aircraft	KGB, GRU
US Phoenix Missile Documents	Semiactive Air-to-Air Missile	KGB
Infrared Radiometer	Reduced Infrared Signature Aircraft	KGB
Fiber-Optics Systems	Aircraft and Missile Onboard Communication Systems	GRU
Air-to-Air Missile Documents	New Air-to-Air Missile	GRU
General Purpose Naval And Antisubmarine Warfare		
Aircraft Carrier Steam Catapult Design Documents	Aircraft Launching System for New Aircraft Carrier	GRU
US MK 48 Torpedo Documents	Antisubmarine Torpedo	GRU
Gamma Radiation Radiometer	Nuclear Submarine Wake-Detection Trailing System	GRU
Acoustic Spectrum Analyzer	Submarine Quieting	GRU
Powerful Acoustical Vibrator	Submarine and Ship Sonars	GKNT, GKES, Academy of Sciences
Space and Antisatellite Weapons		
Documents on Systems and Heat Shielding of the US Space Shuttle	Reusable Space System	KGB
Transit Naval Navigation Hardware	First-Generation Space-Based Naval Radionavigation System	GRU
US NAVSTAR Navigation System Documents	Digital Signal Processing for Counterpart Satellite System	Others
High-Energy Chemical Laser Documents	Space-Based Laser Weapon	KGB
System 101 Processing Equipment	Digital Processing and Video for Space-Based Reconnaissance, Missile, Bomb, and Remotely Piloted Vehicle Command Guidance	Others
Tactical Forces		
International Radar Conference Documents	Synthetic Aperture Radar for Aircraft Detection	GRU
Ground Support Equipment for US TOW Antitank Guided Missile	Countermeasure System	GRU
US Copperhead Laser-Guided Artillery Documents	New Laser-Guided Artillery Shell	GRU
Laser-Guided Missile Documents	Portable Antiaircraft System	KGB
Infrared Imaging Subsystem Designs	Fire-Control System of Future Tank	KGB
Millimeter Radar Documents	Antitank Missile	GRU
Pressure Measuring Instruments and Documents	Advanced Modeling for New Artillery Projectiles	KGB, GRU

Table 2
Selected Worldwide Soviet Acquisitions, Military Applications, and Collectors of Western Documents, Military Hardware, and Dual-Use Products (continued)

Western Technology Acquired	Soviet Application/Improvement	Collector
Manufacturing and Technology		
Kevlar 49 Fiber Documents for Missiles	Improved Missile Development	KGB, GRU
Complete Set of Manufacturing Equipment for Printed Circuit Boards	Copied for 11 Production Assembly Lines for Strategic Missile, Armor and Electro-Optics, and Radar Industries	Ministry of Foreign Trade
DTS-70 Printed Circuit Board Testing System	Military Microelectronic Production System	KGB
Fiberglass Manufacturing Technology	High-Pressure Airtanks for Submarines	KGB, GRU, Ministry of Foreign Trade
Computer Disk Memory Systems	Military Ryad Series Disk Drives	KGB
Bubble Memory Technology	Tactical Missile Onboard Memories	Others
Technical Documents on Tests of Cold-Rolled Steel	Improved Structural Protection of Warships	KGB
High-Accuracy Three-Dimension Coordinate Measuring Machine	Copied for Several Industries	Ministry of Foreign Trade, GKNT, GKES, Academy of Sciences

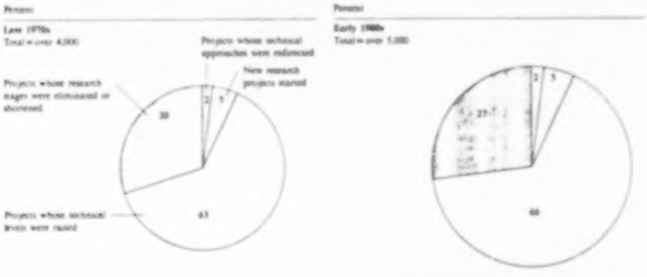
savings doubled between 1976 and 1980 (figure 5) and still are expanding in the 11th Five-Year Plan. The statistics on benefits also point to a massive diffusion of Western technology into Soviet military equipment and weapons. Figure 6 shows how the more than 5,000 military research projects benefiting in the early 1980s were distributed by industry. According to these rough indicators, the electronics, armor and electro-optics, and aviation industries are benefiting the most from Western technology.

Overall, the acquisition of Western technology permits the Soviets to field more sophisticated, versatile, and effective weapons. The basic time for fielding these advanced Soviet weapons, though, remains about the same. It also provides new military capabilities and allows additional resources to be used for the development of additional advanced weapons concepts. The acquisitions also serve to lighten somewhat the burden of continuing growth in Soviet research and defense spending.

Soviet copying and reverse-engineering of Western military and dual-use equipment are major characteristics of the VPK program. Indeed, the majority of VPK requirements for "technology" appears to be for hardware only. In the late 1970s alone, the Soviets acquired about 700 embargoed one-of-a-kind dual-use products each year principally in the area of manufacturing, inspection, instrumentation and test equipment, including key microelectronics production and test equipment. These products were used for making Soviet counterparts or possibly were for use as key manufacturing or test equipment that completed process lines. Examples included computer-controlled integrated circuit testers, aircraft engine vibration control systems, and narrow-band analyzers for submarine quieting.

These practices indicate Soviet deficiencies are in the design, testing, and integration of technologically advanced military systems, not in basic research and applied science. They fall short in the engineering of a device, technologically advanced by Western standards, into a useful piece of militarily applicable hardware producible in large quantities.

Figure 4
Technical and Time Benefits to Thousands of Soviet Military Research Projects From Western Technology



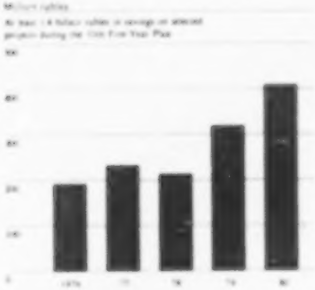
The benefits to the Soviet military research establishment from acquisitions of Western technology are far greater than previously believed. Virtually every Soviet long- and short-term research project for military systems—well over 4,000 in the late 1970s and well over 5,000 in the early 1980s—is benefiting from the documents and hardware of at least a dozen Western countries. (See figure 6 for a breakout of how these projects were distributed by industry.)

Projects in the VPK program are divided into the four major categories shown above. Projects with redirected technical approaches and new projects represent the most significant benefits through adoption of innovations and new directions for military systems. Major pitfalls are thus avoided. Projects whose technical levels were raised and those whose stages were eliminated or shortened represent improvements in the military state of the art of the Soviet Union and an acceleration in the time when more advanced subsystems are ready for new and future weapons.

The profile of the VPK program (as well as the trade diversion program) can be used to better define militarily critical technologies as well as better ways to counter Western losses. Both appear principally aimed at acquiring products and technical data. Both show that protecting dual-use products is just as important as protecting the related design know-how. Equipment sales divorced from the transfer of know-how do have long-term significance for the Soviets. The evidence indicates that equipment transfers, both large batch acquisitions and individual samples used for copying embodied design concepts and for reverse-engineering, generally outstrip acquisitions of "technology" in quantity and are of more immediate value to the Soviets.

VPK Collectors and Sources
Analysis of reliable data indicates that in the VPK program the Soviet Bloc intelligence services (the Soviet Committee for State Security (KGB), the Chief Intelligence Directorate of the Soviet General Staff (GRU), and their surrogates among the East European intelligence services) are the collectors most often tasked and the most successful.

Figure 5
Ruble Savings From Only a Part of Soviet Western Technology Acquisitions



The above savings generally are conservative estimates by the Soviets resulting from the elimination of stages of military research and design projects, the reduction in time to carry them out, and the adoption of new technical approaches. The savings are not cumulative. That is, a 20-million-ruble annual saving from the acquisition of US and other Western fiberglass plastics production technology used in manufacturing high-pressure air tanks for submarines was counted for one year only, the year of acquisition.

Roughly 400 million rubles ($640 million) were saved in 1980 for only a portion of the Western technology acquired. Most of these savings were in long-term military research projects for weapons of the late 1980s and early 1990s. They therefore were most likely given in terms of manpower savings. By this measure several tens of thousands of Soviet man-years of scientific research effort were saved in 1980.

During the late 1970s and early 1980s the Soviet intelligence services acquired, through their own efforts and those of the surrogate East Europeans, about 60 to 70 percent of all materials collected in the overall VPK program each year (figure 7). More important, these intelligence services were involved in collecting worldwide about 90 percent of the information judged by Moscow as most significant and used

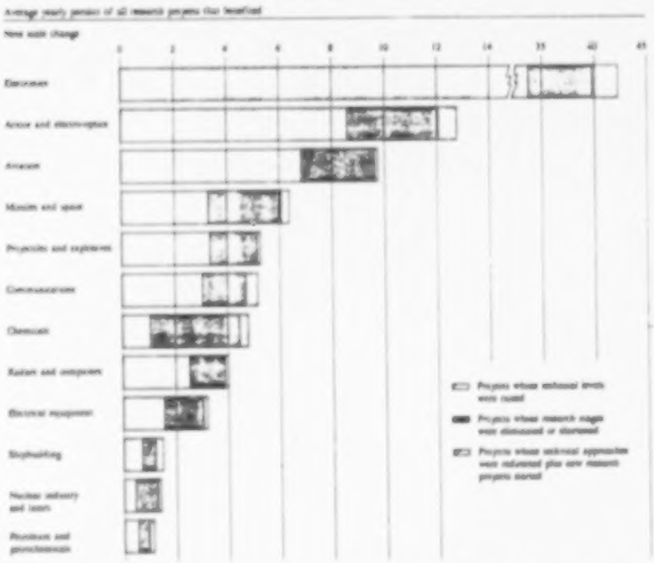
Microelectronics Reverse-Engineering

Soviet collectors have easily acquired many types of Western integrated circuits (ICs) for reverse engineering. Indeed, most Soviet ICs can be traced to a Western original. One of the best examples is their KR580IK80A microprocessor, which is a modified version of the Intel Corporation 8080A 8-bit microprocessor used in many US military systems. In this case, the Soviets even copied the equivalent US part number to avoid confusion (note the KR5 80 IK 80A versus the US 8080A).

Furthermore, the evidence clearly shows that Soviet ICs known as LOGIKA-2 and series 133/155 were directly copied from the Texas Instruments 5400/7400 family. These ICs have been used in Soviet strategic and tactical military systems since the mid-1970s to provide important qualitative improvements. The more advanced Western fabrication equipment acquired by the Soviets in recent years has been used to produce copies of sophisticated Western ICs for their latest generation of weapons. If the Soviets succeed in acquiring the next generation of materials, equipment, and parts, their military capabilities will continue to improve in the area that is the major strength of the West—quality.

The USSR's practice of reverse-engineering, however, may soon run into problems. As US and Japanese ICs become more complex, reverse-engineering will require: (a) tracking hundreds of thousands of connections, (b) understanding how they all fit together, and (c) mastering the complex processing steps used in production. Thus, copying such circuits will require not only much more sophisticated Western equipment but also much more time to duplicate each circuit, causing their overall microelectronics gap with the West to widen.

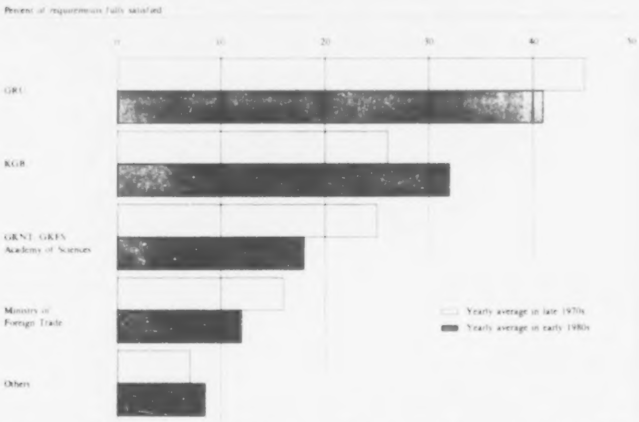
Figure 6
Rank Ordering of Industries by Soviet Military Research Projects Benefiting From Western Technology, Early 1980s



The assimilation of Western technology into Soviet industries conducting military research is considerable. The greatest beneficiaries were the electronics and armor and electro-optics industries, which accounted for over 50 percent (equaling thousands) of all military research projects benefiting from Western technology in the early 1980s.

The general distribution points out the rather broad effect that Western documents and hardware have had on raising the technical levels of Soviet military research. This is particularly true for the top three industries, where advanced technology and innovative design concepts play a significant role in weapon developments.

Figure 7
Soviet Military Requirements Satisfied by Principal Collection Agencies in the Overall VPK Program, Late 1970s and Early 1980s



The distribution shows that the KGB and the GRU (and their surrogates among the East European intelligence services) were the main collectors in the *overall* VPK program. They were involved in satisfying roughly 60 to 70 percent of all VPK requirements completely fulfilled during the late 1970s and early 1980s. (Percentages do not add to 100 because several agencies contributed to fulfilling some of the same requirements.)

Although not evident from the above data, both the KGB and the GRU significantly increased their efforts in the early 1980s because the average *number* of requirements fulfilled so far in the early 1980s (11th Five-Year Plan) increased about 50 percent over the late 1970s.

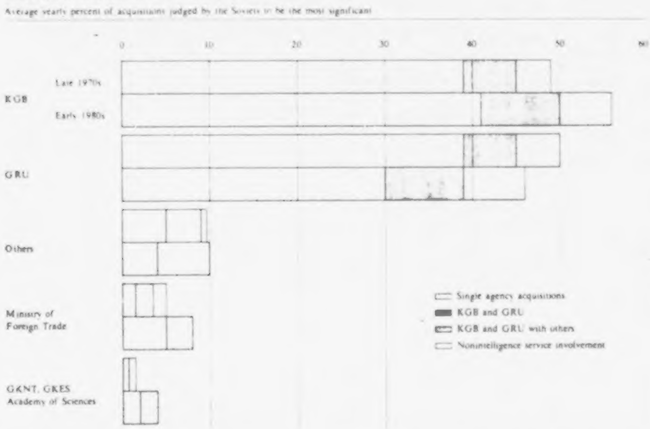
The State Committee for Science and Technology (GKNT) and associated collectors surprisingly were the third main collecting entity, satisfying a relatively large percentage. Figure 8 shows, however, that they were credited with satisfying about 5 percent of a selected subset of acquisitions, those judged by the Soviets to be the most significant to their military research projects.

in many hundreds of military research projects (figure 8). Both the KGB and the GRU levy some of the VPK requirements on surrogates among the East European counterpart services. The KGB probably owes a higher percentage of its collection to these East European civilian intelligence services than does the GRU to its East European counterparts. All use human assets worldwide.

Coordination with the East European services is conducted through the liaison functions at both KGB and GRU headquarters as well as through KGB and GRU advisers in the various Warsaw Pact intelligence services. Since the mid-to-late 1970s the surrogates

Figure 8
Most Significant Acquisitions Satisfied by Principal Collection Agencies, Late 1970s and Early 1980s

The KGB and GRU were involved in collecting about 90 percent of the Western acquisitions judged by the Soviets to be the most beneficial to their military development projects (late 1970s and early 1980s.)



In contrast to figure 7, which shows results for the *overall* VPK program, this figure shows the main collection agencies for a selected subset of acquisitions—those judged by the Soviets to be the most significant to their military research projects for the periods indicated. The Soviet intelligence services and surrogates are the key collectors in the VPK program. Their approximate 90-percent association with the most significant acquisitions (100 percent less the percentages from the categories labeled "nonintelligence service involvement" and nonintelligence "single agency acquisitions") indicates the West has a counterintelligence and industrial security challenge.

About 60 percent of the acquisitions were of US origin (but not necessarily acquired in the United States). The several hundred acquisitions for each period in the statistics above are a small subset of those acquisitions shown in the statistics for the overall VPK program.

among these services have played a major role in the overall VPK collection program, often in return for Soviet economic concessions to their countries. The intelligence services of East Germany, Poland, and Hungary are among the most successful in acquiring Western classified data and export controlled products.

During the late 1970s and early 1980s the GRU probably fulfilled two to 10 times as many VPK requirements as the KGB for the important defense-industrial ministries of:

- Communications Equipment Industry (defense and satellite communications systems)—10 times.
- Machine Building (projectiles and explosives)—five times.
- General Machine Building (strategic missiles and space vehicles)—five times.
- Medium Machine Building (nuclear industry and lasers)—two times.
- Radio Industry (radars and large-scale computers)—two times.

The GRU probably is more successful because of its overall scientific orientation, its bolder operational style, its increased collection opportunities that reflect a wider variety of technology-related cover positions overseas, and its clearer understanding of collection objectives.

The KGB. The First Chief Directorate (foreign intelligence) of the KGB conducts science and technology collection operations through its headquarters component known as Directorate T. Directorate T probably has approximately 1,000 officers, with nearly 300 on foreign assignment. The officers on foreign assignment are organized into components known as Line X, and most of them are scientific specialists by both academic and professional training. The largest KGB complements are probably in Bonn, Cologne, London, New York, Tokyo, and Vienna. (Paris was one of the largest until mass expulsions in 1983.)

Line X officers abroad typically occupy such cover positions as science attaches in a Soviet embassy or equivalent positions in the commercial or economic sections of Soviet missions or an international organization. Other preferred cover positions for these officers are as officials in various Soviet trade missions or as members of scientific or other academic exchanges. Such positions provide easy access to the types of information targeted by the VPK or to foreign personnel who could provide such access. Cover as an "acceptance engineer" at a company with a Soviet contract is also a preferred way to acquire proprietary secrets.

The GRU. The Chief Intelligence Directorate of the Soviet General Staff has emphasized the collection of military scientific data since the earliest days of Soviet military intelligence. Unlike the KGB, the GRU has no headquarters component specifically charged with managing scientific collections; rather, this function is part of the overall responsibilities of four geographic operational directorates. GRU headquarters does, however, have a scientific information analytical directorate that supports scientific collection efforts.

The GRU does not have a separate cadre of career scientific specialists in the field; instead, most GRU officers have technical backgrounds and education as well as years in a military specialization. Approximately 1,500 GRU officers serve outside the USSR. For all of them, scientific collection is an integral part of their responsibilities and a high priority.

The GRU probably has a higher percentage than the KGB of officers with cover positions that provide more access to Western scientific targets and more methods of transporting export controlled products and technical data to the Soviet Union. Some of these positions similar to those of the KGB's scientific specialists are in scientific or commercial sections of Soviet missions or international organizations and various foreign trade offices. In addition, the GRU officers often have positions in Aeroflot (the Soviet airline) and Morflot (the Soviet merchant marine). All Soviet military attaches are GRU officers, of course. The GRU, however, does not seem to use cover positions in academic and technical exchanges to the same extent as does the KGB.

Selected Sources.

US Defense Contractors. Moscow views US and Allied defense contractors with their proprietary and government security controls as difficult targets. Accordingly, the KGB, the GRU, and their surrogates among the East Europeans are the collectors primarily tasked to operate against them. Of the top 100 US defense contractors for 1983, nine of the 10 most frequently cited by the Soviets as sources of needed technology were in the aerospace industry (table 3). The next group most frequently identified was the chemical and petrochemicals industries.

Although the Soviet Bloc intelligence services are the primary collectors of scientific and technological information in the VPK program, it is estimated that about 90 percent of the roughly 100,000 documents acquired each year worldwide are unclassified. About 10 to 20 percent of these unclassified documents are either under proprietary corporate, export, or other government controls. The Soviet intelligence services and their surrogates among the East European services probably provide Moscow with about 10,000 technology-transfer-related classified documents each year from the West. Analysis and operational observations indicate that only a small percentage of these are collected through Soviet intelligence service operations in the United States.

Analysis of hostile intelligence activities indicate that in recent years the surrogates among the East European intelligence services possibly have been more successful than Soviet intelligence against priority defense technologies in the United States. East European services have had considerable success not only in the United States, but elsewhere because:

- They are generally perceived as a lesser threat than the Soviets.
- They often may not be perceived as operating in a surrogate role.
- In some countries, including the United States, they operate under less severe travel restrictions.
- Some, especially the Czechoslovaks and the East Germans, probably find it easier to operate in the West European cultural and commercial climate.

Recent examples of Soviet Bloc espionage operations against US and other Western defense contractor targets are presented in table 4.

As a result of various coproduction arrangements and contract bidding among foreign firms, the availability of much US defense contractor technology overseas in US subsidiaries and in other firms has increased. This enables Soviet Bloc intelligence to seek priority US technologies in many countries around the world.

Commercial Data Bases. Unclassified technical documents from all countries—including engineering analyses and research results—are targeted by Soviet intelligence and other collectors because of their value to Soviet engineers seeking creative designs and alternative engineering approaches. For example, from the mid-1970s to the early 1980s, NASA documents and NASA-funded contractor studies provided the Soviets with their most important source of unclassified material in the aerospace area. Soviet interests in NASA activities focused on virtually all aspects of the space shuttle. Documents acquired dealt with airframe designs (including computer programs on design analysis), materials, flight computer systems, and propulsion systems. This information allowed Soviet military industries to save years of scientific research and testing time as well as millions of rubles as they developed their own very similar space shuttle vehicle.

The individual abstracts or references in government and commercial data bases are unclassified, but some of the information, taken in the aggregate, may reveal sensitive information concerning US strategic capabilities and vulnerabilities. Numerous unclassified US Department of Defense and contractor documents are sought by the Soviets from the Commerce Department's National Technical Information Service. Documents dealing with design, evaluation, and testing of US weapon systems—the Sidewinder air-to-air missile, the F-15, the Redeye shoulder-fired antiaircraft missile, the B-52, and others—are in the data base.

The public and private document clearinghouses—established to efficiently index and disseminate the results of government and government-sponsored military-related technical research—are a fertile ground for KGB, GRU, and other collectors. In recent years, the growing use of electronic data bases has provided the Soviets with an even more efficient means of identifying and procuring such unclassified technical information needed by Soviet designers.

Table 3
Rank Ordering of Top 100 US Defense Contractors of 1983 Compared With Their Rank Ordering by Approximate Frequency of Soviet Identification for Needed Technology, Selected Periods in Late 1970s and Early 1980s

Dollar Value Rank	Company	Soviet Identification Rank
1	General Dynamics	8
2	McDonnell Douglas	5
3	Rockwell International	4
4	General Electric	1
5	Boeing	2
6	Lockheed	3
7	United Technologies (Pratt & Whitney)	11
8	Tenneco	31
9	Hughes Aircraft	15
10	Raytheon	23
11	Grumman	21
12	Martin Marietta	7
13	Litton Industries	20
14	Westinghouse Electric	6
15	IBM	19
16	LTV	24
17	FMC	30
18	RCA	27
19	TRW	26
20	Sperry	17
21	Honeywell	12
22	Ford Motor (Ford Aerospace)	22
23	General Motors	14
24	AT&T	[a]
25	EXXON	28
26	Northrop	19
27	Allied (Bendix)	9
28	Maersk Line Ltd	
29	AVCO	16
30	GTE	32
31	Textron	32
32	Singer	23
33	Texas Instruments	16
34	Hughes Helicopters	
35	General Tire & Rubber (Aerojet)	15
36	ITT	31
37	Standard Oil of California	30
38	Teledyne	27
39	Motor Oil Hellas	
40	SoberSno	
41	Pan American World Airways	32
42	Harris	32
43	Todd Shipyard	
44	Eaton	31
45	Goodyear Tire & Rubber (Goodyear Aerospace)	17
46	Guam Oil & Refining	
47	Atlantic Richfield (ARCO)	31
48	Sanders Assoc	32
49	Waterman Marine	
50	Signal Co (Garrett)	19
51	Royal Dutch Shell Group	23
52	Motorola	25
53	North American Philips (Magnavox)	27
54	E Systems	
55	Hercules	24
56	Morrison Knudsen	
57	Mobil	29
58	Ogden	
59	Morton Thiokol	19
60	Gould	32
61	Congoleum	
62	Caterpillar Tractor	25
63	Emerson Electric	30
64	Control Data	30
65	Standard Oil of Indiana	30
66	Coastal	
67	Penn Central	
68	Aerospace	24
69	Fairchild Industries	25
70	HBH (Hughes Air/Bendix/Holmes)	
71	MIT	13
72	Burroughs	24
73	Pacific Resources	
74	Johns Hopkins University	32
75	Oshkosh Truck	
76	Gulf Oil	30
77	Ashland Oil	31

[a] An ellipsis indicates that no targeting for specific technology or hardware was noted during the sampling period to rank these companies; this is not a complete indication that there was no hostile targeting of those companies. Other companies not among the top 100 are known to have been identified by the Soviets for needed technology.

Table 3 (continued)

Dollar Value Rank	Company	Soviet Identification Rank
78	Mitre	
79	Rolls Royce Ltd	30
80	Du Pont	10
81	Williams International	32
82	Reynolds Industry	29
83	Duchossois Thrall Group (Chamberlain)	29
84	NI Industry (Norris)	
85	Sam Whan	
86	Computer Science	...
87	Xerox	
88	Brunswick	30
89	Hewlett Packard	27
90	Gulf States Oil & Refining	18
91	SAI	...
92	Sunstrand	...
93	Kaman	
94	Kuwait Petroleum	
95	Harsco	...
96	Lear Siegler	30
97	Varian Associates	29
98	Southern Union	...
99	Cubic	32
100	Digital Equipment	29

In the VPK program the Soviets issue general guidance to collectors to acquire selected information on, for example, a system (the US Space Shuttle) or a subsystem/technology (electro-optical guidance techniques of the US Maverick or TOW missiles). They follow up this guidance with specific "requirements" and allocate funds for particular pieces of hardware (MK 46 torpedo: more than 1,250,000 rubles (more than $3.5 million), or a U-2 aircraft radio: more than 50,000 rubles), or a document (K-250K-D gyroscope: more than 20,000 rubles), or a dual-use product (excimer laser: more than 20,000 rubles). The government agencies, companies, or contractors that have such information or products are specified. The rank ordering in this table is representative of the number of times a company was specifically identified as a source of needed information and hardware during a selected period. Duplicate numbers beginning with Soviet rank 15 indicate ties in the number of times identified. The data available give a rough indication of large Soviet ongoing needs for innovation in specific aerospace design concepts and hardware as well as for chemical technology and manufacturing equipment.

One solution appears to be to thoroughly screen all candidate data base entries and keep sensitive government information out of the public data bases or limit its availability to US and Allied defense contractors. Unfortunately, this may also inhibit the United States' own national research effort by restricting the ready availability of such information.

Scientific Conferences. Collection of information from professional and academic conferences on applied science and technology has also contributed to the success of the Soviet program. At least 35 conferences worldwide were identified in the VPK program as potential sources of specific data in the late 1970s to assist in solving military research problems. These included conferences on materials, missiles, engines, lasers, computers, marine technology, space, microelectronics, chemical engineering, radars, armaments, and optical communications. The Soviets judged some of the data acquired from these conferences to be among the most significant contributing to their military projects. Conferences in the late 1970s and early 1980s (and Soviet evaluation of the data) ranked in order of significance were the:

- International Radar Conference (improved circuit designs for synthetic aperture satellite radars and aircraft over-the-horizon radars)—Collector: GRU.
- Conference on Integrated Optics (assisted in identifying ways to produce a qualitatively new Soviet category of integrated optical devices for fiber-optics communications)—Collector: KGB.

Table 4
Selected Successful Soviet Bloc Espionage Operations Against US and Other Western Defense Contractor Targets

Agent	Hostile Service	Dates Operated	Access	Impact
William Bell	SB Poland	1978-81	US citizen. Radar specialist, Hughes Aircraft Company. Worked on advanced US radar systems, experimental radar systems, and air-to-air and surface-to-air missiles.	Saved the Soviets several tens of millions of rubles in research efforts; advanced Soviet technology by about five years by permitting them to implement proven design concepts.
Pierre Bourdiol	KGB	1973-83	French engineer.	Currently undergoing trial.
Dieter Gerhardt	GRU	1964-83	South African naval officer who had attended the British Royal Navy College and served at the Embassy in London. Later was a scientific research staff officer.	Passed information on various antiaircraft missiles.
James Harper	SB Poland	1975-81	US citizen. Electronics engineer. Through his girlfriend/wife he had access to Ballistic Missile Defense Advanced Technology Center contracts at Systems Control Inc., California.	Provided dozens of documents on potential US ballistic missile defense programs, ICBM basing modes, and related technology. Afforded Soviets a unique look at potential US future systems concepts.
Manfred Rotsch	KGB	1967-84	West German. Head of the Planning Department of the aviation firm Messerschmitt-Bolkow-Blohm (MBB).	Passed information on the "Tornado" aircraft produced by the European Panavia consortium.

- Conference of the Aerospace and Electronic Systems Society of IEEE (helped technical solutions to existing problems and improved the characteristics of a low-altitude target detection radar)—Collector: KGB.

- International Conference on Radar (assisted development of signal processing for passive jamming suppression methods and for radars to detect distant aircraft targets)—Collector: GRU.

- International Conference on Nontraditional Energy Transformation Systems (refined directions of research on space-based nuclear reactors)—Collector: KGB.

- Conference on Millimetric and Submillimetric Equipment (assisted in design solutions for millimeter wave proximity fuzes)—Collector: KGB.

- Symposium on Solar Energy Conversion (increased efficiency and decreased costs for electron beam deposition of coatings on solar components for space vehicles)—Collector: GRU.

According to Soviet estimates, the information obtained by the KGB and GRU from these conferences alone, particularly the first three, produced savings of millions of rubles in long-range military research projects—savings roughly equivalent to 100 man-years of effort. The fact that numerous professional and scientific conferences are specifically identified as valuable sources in advance by the VPK indicates their exploitation is not fortuitous, but carefully planned.

Ministry of Foreign Trade. The Soviet Ministry of Foreign Trade administers and operates hundreds of foreign trade organizations and firms around the world. This global presence and the ministry's official duties related to technology and transportation make it a practical cover organization for hundreds of KGB and GRU officers involved in technology acquisition efforts. These officers conduct overt and covert collection operations and channel the results through their respective intelligence organizations for accountability in the VPK system.

In addition to providing cover for intelligence officers, the Ministry of Foreign Trade is also a major independent collector in the VPK program and attempts to pursue most of its assigned VPK requirements on an overt basis. During the late 1970s and early 1980s, it helped fulfill about 15 percent of all fully satisfied VPK requirements (figure 7). More important, it fulfilled 9 percent of those satisfied requirements identified as "most critical." Also during that period its role was specialized, focusing largely on the acquisition of microelectronics manufacturing equipment and communications dual-use products. In view of this, it is not surprising that throughout the 10th and thus far in the 11th Five-Year Plans the Ministry of Foreign Trade was assigned to collect the largest percentage of samples (a yearly average of approximately 30 percent) as opposed to documents. The ministry also has a major role in the illegal trade activities discussed later in this report.

Overt and Academic-Related Collectors. The Soviet Academy of Sciences is another collector in the VPK program. So too are the State Committee for Science and Technology (GKNT) and the State Committee for Foreign Economic Relations (GKES). Although these organizations are involved principally in overt collection of information for nondefense industries, they also are involved in worldwide overt collection of information and technical data in response to specific VPK tasking for military research projects. Sometimes they are tasked jointly with the KGB and other collectors to satisfy these requirements.

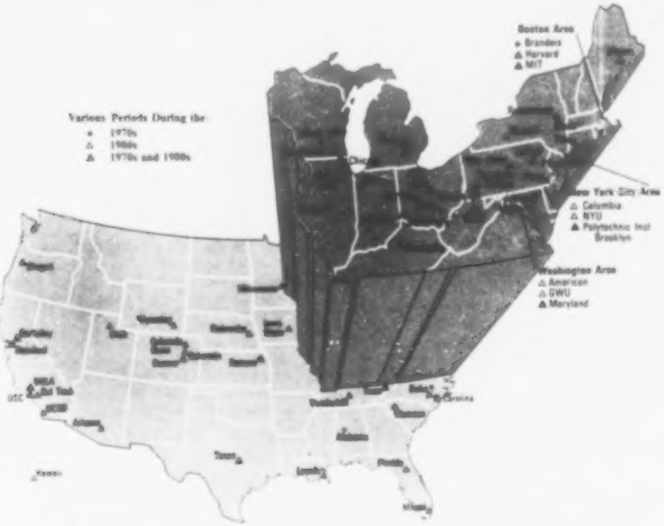
These three collection agencies, especially the Academy of Sciences and the GKNT, operate in the West in a milieu of scientific, academic, and business conferences. They and others help send approximately 2,000 Soviet Bloc citizens to the United States each year in a nontourist status. A portion of those visiting probably respond to high-priority VPK requirements. Additionally, many Soviet scientific personnel have been co-opted to some degree by the Soviet intelligence services to provide assistance to VPK and other collection activities.

During the late 1970s and early 1980s, Soviet scientific collection directives identified numerous universities worldwide that had needed information. Perhaps as a vote of confidence in US academic research, the number of US academic centers targeted has increased from about 20 to over 60 during this period. The universities cited as sources for both applied military-related technology and for civilian scientific data include some of the finest in the United States (figures 9 and 10). The majority of information sought at universities for the VPK program was applied technology and engineering, and not fundamental or basic research.

Carnegie-Mellon, Cincinnati, Kentucky, Massachusetts Institute of Technology (MIT), Michigan, and Wisconsin were among those universities (as well as defense contractors) identified in the VPK program as sources for information on new high-strength, high-temperature alloys, such as titanium, on lightweight structural alloys, and on powder metal processing. California Institute of Technology, Harvard, and MIT were targeted for techniques, methodologies, and results for evaluation of strategic concepts on space, aviation, and missile systems. California Institute of Technology and MIT were also cited as sources for transonic, supersonic, and hypersonic aerodynamic research, as were the Polytechnic Institute of New York (Brooklyn), Princeton, and Stanford. Kansas, MIT, Ohio State, and Penn State were identified for data relating to electrohydraulic control systems applicable to aircraft, helicopters, and the Soviet version of the US Space Shuttle. Research applicable to future high-energy laser and particle beam weapons was sought from MIT, Denver, and Princeton.

As illustrated in figure 7, the three overt and academic-related collectors rank third in the overall VPK program, satisfying about 20 percent of those requirements that were completely fulfilled by all collectors. On the other hand, figure 8 shows that while their overall contribution to Soviet military research collection is large in volume they accounted for about 5 percent of the technology judged most significant by the Soviets during the late 1970s and early 1980s. Acquisitions included information on developing and manufacturing composite materials for missiles and space systems; automated control designs for highly

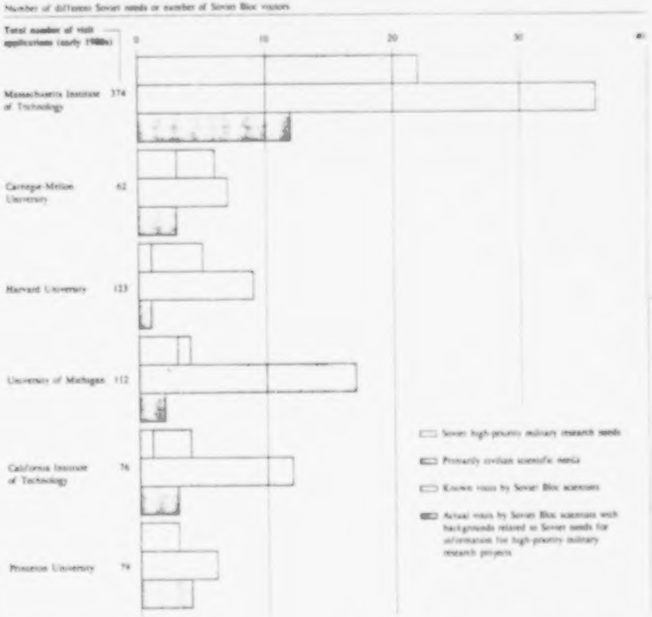
Figure 9
Selected US Universities Identified by the Soviets as Sources of Needed Applied Technology


Various Periods During the
● 1970s
△ 1980s
▲ 1970s and 1980s
Boston Area
● Brandeis
▲ Harvard
▲ MIT
New York City Area
△ Columbia
△ NYU
▲ Polytechnic Inst Brooklyn
Washington Area
△ American
△ GWU
▲ Maryland
USC
Carolina

Over the past decade or so about 40 percent of the US universities shown above were identified in the VPK program as sources of applied science and technology principally for Soviet military aerospace developments. The State Committee for Science and Technology also issues requirements against US universities, but principally for fundamental research for both Soviet military- and civilian-related science developments.

Known Soviet collectors at US and other Western universities include those from the intelligence services, scientists within the Academy of Sciences, and scientists from the State Committee for Science and Technology who come to study in the United States. Many of these collectors are also involved in spotting and assessing US scientists for potential recruitment as agents.

Figure 10
Soviet Needs for Applied Science and Technology From Selected US Universities Compared With Number of Visiting Soviet Bloc Scientists, Early 1980s



The above US universities, as well as Stanford, California at Berkeley, Cornell, and the Illinois Institute of Technology, were identified by the Soviets more often than others during the early 1980s as sources of technology needed for high-priority military and civilian research projects. There is a rough correlation between the number of VPK-identified *military* research needs and the number of visiting Soviet Bloc scientists with backgrounds related to those technical areas. There is, however, little data indicating that specific scientists were tasked to acquire information for Soviet military research projects.

accurate coordinate measuring machines for quality control of weapon components and subassemblies; information on automatic control systems for optimizing rolling mills; acoustical data for developing low-frequency sonars for submarines; and information on aerial photography, magnetic recording systems, and lasers.

The Trade Diversion Program: Building and Expanding Industries

Numerous sources and data indicate the existence of a program separate and administratively different from the VPK program, but comparable to it in scope. This second program is characterized not by requirements for one-of-a-kind equipment, but by illegal and legal acquisitions of relatively large numbers of dual-use products for Soviet military programs. These products are requested by the defense industries for direct use in manufacturing lines to increase the throughput or output of plants or for designing future equipment. Often manufacturing cells, complete production lines, or even entire plants are sought from the West. Much of this equipment and technology falls into the areas of computers, microelectronics, numerically controlled machine tools, robotics, and material fabrication.

This second Soviet program is probably less structured than that of the VPK, but just as rigidly monitored because of the large amounts of hard currency necessary. This is the Soviet program that appears to be largely responsible for orchestrating and managing most of the worldwide trade diversions, particularly in the areas of computers and microelectronics.

Computers and Microelectronics

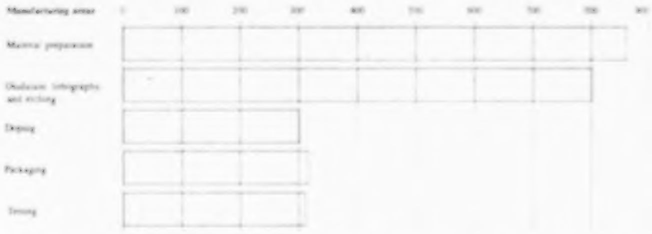
Major Soviet diversion efforts are targeted at microelectronics fabrication equipment and computers; nearly half of detected trade diversions fall into these categories. Using unscrupulous Western traders who employ license falsifications, deceptive equipment descriptions, dummy firms, false end users for illegal purchases, and smuggling, as well as assistance from intelligence operations, the USSR has acquired at a minimum several thousand pieces of major microelectronics fabrication equipment during the last 10 years (figure 11). The equipment acquired through these efforts is largely responsible for the significant advances the Soviet microelectronics industry has made thus far, advances that have reduced the overall Western lead in microelectronics from 10 to 12 years in the mid-1970s to four to six years today. Western microelectronics manufacturing equipment has been applied throughout the entire production process—from materials preparation to the final testing apparatus needed for sophisticated production lines. In fact, total design and fabrication lines may have been acquired from single diversion operations.

Volume purchases, legal and illegal, characterize the second Soviet program. Examples of microelectronic products that the Soviets illegally acquired from the United States, Japan, and other countries in one year during the early 1970s include 30 sophisticated crystal pullers, 99 diffusion furnaces, three integrated circuit (IC) testers, and 10 mask aligners. The next year they diverted 24 crystal pullers, 64 diffusion furnaces, three photorepeaters, three pattern generators, three epitaxial reactors, and an IC tester. Such purchases have been used directly in assembly lines for military production. In the future, large quantities of test equipment for sophisticated very-large-scale integrated (VLSI) circuits will be a major target.

Volume purchases of materials are also part of the second program. Before 1980, the Soviets purchased hundreds of tons of electronics-grade silicon (not under export controls at that time). This is the raw material needed for integrated circuits for both military and civilian uses. The silicon originated primarily from the United States, West Germany, and Japan. After the sale of electronics-grade silicon to the USSR was restricted, Soviet acquisitions continued through worldwide diversions. Future acquisitions of silicon very likely will begin to concentrate on the very high-quality silicon produced in the United States, West Germany, and Japan for use in producing VLSI circuits.

Figure 11
Soviet Acquisitions of More Than 2,500 Pieces of Western Microelectronics Manufacturing Equipment, Early 1970s – Early 1980s

Number of major pieces of dual-use equipment



Over the past few years the Soviets have virtually completed their entire building construction program for manufacturing military microelectronics components. To equip many of these buildings with advanced production equipment, they acquired more than 2,500 pieces of major Western controlled and uncontrolled microelectronics fabrication equipment covering the entire spectrum of manufacturing operations. They acquired this equipment from the United States, Japan, and Europe, and diverted it through many parts of the world. Years of illegal acquisitions of large numbers of dual-use products through worldwide trade diversions have enabled the Soviets to narrow the microelectronics technological gap with the West from 10 to 12 years a decade ago to about four to six years today.

Integrated circuits intended for direct use in Soviet systems are usually acquired from the United States and Japan by trading companies in various parts of the world, and then shipped in huge numbers to Soviet and East European destinations. As many as 100 million circuits may be shipped in this manner every year.

In direct monetary value, volume acquisitions through illegal trade probably far exceed those of the VPK-directed effort. The Soviets have diverted thousands of different items of high technology in the past two decades, totaling perhaps billions of dollars in hardware value alone. Most of these illegal acquisitions have been facilitated or conducted autonomously by unscrupulous traders. The manufacturers of high-technology production equipment have rarely been knowingly involved in diversions; indeed, they have often been victims.

The Soviets have arranged most diversions through Europe, but their use of Asia as a diversion route is growing. Over 300 firms in more than 30 countries have been identified as engaged in diversions. Many more companies probably exist—some involved in only a few operations and quitting or disbanding before becoming well known or vulnerable.

Participants in the Second Program

The Soviet intelligence services and the Ministry of Foreign Trade are involved in various ways with most of this illegal trade, some of which is conducted through ostensibly normal trade channels. The Ministry of Foreign Trade and industrial ministries operate a large network of foreign trade organizations, commercial offices, joint companies, and foreign procurement offices whose staffs know the hardware markets and act as ready contacts for technology traders and diverters who may volunteer their services to the Soviets. They are also quite adept at spotting opportunities for diversions and obtaining controlled Western products. These functions are performed by legitimate Soviet trade officials, intelligence officers under trade cover, and trade officials working directly for intelligence officers. Many of the 141 Soviets expelled from 25 countries during 1983 were assigned in some capacity with the Ministry of Foreign Trade.

The Soviet illegal trade program appears to be administered and managed in the trade ministry's Main Engineering and Technical Administration (GITU). Although it is a component of the ministry, GITU is staffed and managed largely by intelligence officers, organized into separate KGB and GRU groups by their respective headquarters. Its subordinate Department for Technical Cooperation with Foreign Countries is similarly staffed and managed. GITU reportedly exercises some supervision over all technical Soviet foreign trade organizations and all technical joint trading companies.

The GITU staff has grown from about 12 in 1970 to about 70 in 1983. Its subordinate Department for Technical Cooperation with Foreign Countries numbers over a hundred. The intelligence officers assigned to GITU, and to the Ministry of Foreign Trade in general, blend into a number of roles in carrying out their assignments. Soviet intelligence service personnel (as well as their East European surrogates) are in embassy commercial sections, trade missions, consulates, commercial organizations, and joint stock companies in the West. Moreover, intelligence officers have been identified as employees of foreign trade organizations in the Soviet Union and their offices elsewhere in the world.

Although GITU is largely a Soviet intelligence service domain (with the GRU probably filling most cover positions), that does not mean that all trade diversion operations are conceived of and supervised on a daily basis by intelligence officers. Some evidence indicates that the GRU is involved with more trade diversion operations than the KGB, but it is unknown if this is by design or rather a practical manifestation of the high proportion of foreign-trade-related GRU cover positions. Legitimate Soviet trade officers in Warsaw Pact countries are also involved in trade diversions, and not merely as intelligence co-optees.

Use of Diverters-for-Hire

One of the most effective and secure trade diversion methods used by the Soviets is the contract or broker diverter. Contract diverters work for set or negotiated fees; broker diverters receive a commission, usually a percentage of the equipment purchase price. Both are individual traders or businessmen with some affiliation to high technology manufacturing or trade circles. They are very knowledgeable of high-technology markets and product availability and either volunteer their services to the Soviets or are spotted by Soviet assets in the West or in the USSR. Some have global expertise and connections; some specialize in operations in a few countries or a few technology product lines. In some cases, the Soviets have used diverters with known track records of trading almost exclusively, or in high volume, with the East Europeans.

Whether a volunteer or selected by the Soviets, a potential contract or broker diverter is generally screened to determine the scope and depth of his contacts, range of trade abilities, and access to pertinent high-technology markets and manufacturers. In some cases such an assessment may be a rigorous one, in others perhaps only superficial. A most important quality, however, is the ability to deliver goods as scheduled, for close to the agreed prices, without complications or risks to the Soviet customer.

Although many Soviet intelligence officers are involved with negotiating and contracting with diverters, this procedure is not a classic intelligence operation and is analogous to an intelligence "recruitment" in timing only. The diverter does not accept intelligence discipline as would an "agent." Indeed it makes little or no difference to diverters if they are dealing with intelligence principals as opposed to trade officials, save for the need to avoid the suspicions of espionage. Additionally, most diverters probably do not enter into a permanent relationship with their Soviet principals, but rather into one that is only for the duration of one or a series of formal or informal contracts for specific products or services.

Although there are dissimilarities among contract or broker diversion operations, there are some characteristics that seem consistent:

- The Soviets incur minimal, if any, risk or legal liability. Many, if not most, contracts are scheduled, briefed, signed, or verbally agreed to in Moscow or another convenient denied area or are obscured by the conduct of legitimate overt business.
- Little or no contact is maintained with the diverter. This seems especially true of diverters operating on behalf of a Soviet intelligence service.
- For the most part, the diverter has autonomy in operational decisions, including arranging front organizations, product availability, purchase, shipping, storage, and delivery. At times diverters also perform initial professional setup, testing, and servicing of equipment. In so doing they rely exclusively on professional overt and covert colleagues.
- Fees are negotiable. The Soviets will pay lucrative, but not outrageous prices. Fees can also be raised during the course of the diversion if more costs or risks are entailed by the diverter.
- Payment is generally through letter of credit deposited by the Soviets to the diverter's bank account.

The use of contract or broker trade diverter operations by the Soviets minimizes, if not obviates, the risk to their intelligence residences and trade officials while simultaneously assuring the application of professional business and trade diversion know-how to the technology acquisition task. Because of the low Soviet profile in these operations, more vigorous law and trade control enforcement may be more effective in stemming contract diversion than counterintelligence responses, although both efforts clearly have an important role.

Contract Trade Diverter: Richard Mueller

Richard Mueller, a West German citizen, is wanted in that country and in the United States for many cases involving illegal exports of COCOM-controlled computers, microelectronics, and other products to the USSR. His involvement with illegal technology acquisition on behalf of the Soviet Bloc dates back to the early 1970s. By 1978 Mueller's deals were made almost exclusively with Soviet foreign trade officials; some of these officials were intelligence officers under cover. For his network, Mueller uses numerous dummy and front firms and meets with his Soviet principals in Moscow to mask his activities. At one time he had more than 75 firms operating in Austria, France, Switzerland, the United Kingdom, the United States, and West Germany.

Between 1978 and 1983 Mueller delivered to the Soviets advanced computers, peripherals, and microelectronics manufacturing equipment worth at least several tens of millions of dollars. Perhaps Mueller's best known operation was his attempted diversion to the USSR in late 1983 of seven large US Digital Equipment Corporation VAX computers and related hardware and software. The VAX series of super minicomputers are valuable to the Soviets because of their computer-aided design (CAD) applications for microelectronics fabrication. This equipment was purchased in the United States for Mueller's dummy firms in South Africa and West Germany. Much of it was seized by Sweden and West Germany enroute to the Soviet Union.

Other Diversion Methods

Soviet foreign trade officers also attempt to make small Western firms dependent on Soviet legal orders over a period of years. For such firms, who are not contract or broker trade diverters, the occasional

Soviet request for illegal purchases or a support role in a larger illegal trade operation appears difficult if not impossible to refuse. Indeed, some firms may even be drawn into complicity or support for Soviet diversion operations unwittingly or gradually. It has long been a concern in the West to limit the expansion of Soviet foreign trade organizations abroad because of the opportunities they offer for this type of diversion activity. Although it has become more difficult for the Soviets to conduct this type of activity, Moscow continues to keep these diversion channels open.

The Soviets also acquire technology to modernize manufacturing through another mechanism, the so-called acceptance engineers. They are assigned as quality inspectors on a long-term basis, usually a year or longer, to Western firms engaged in manufacturing items for Soviet end users. These may be intelligence officers or Soviet personnel who are co-opted to steal proprietary production or technical data. They also use this opportunity for agent spotting for immediate or future exploitation. Use of acceptance engineers for collection is especially practical in countries with advanced manufacturing technology. Companies in Western Europe and in Japan have been targeted with this approach.

Prospects for Stemming Losses

The West needs to better organize to protect its military, industrial, commercial, and scientific communities, keeping two objectives clearly in view:

- First, it must seek to maintain its technological lead over the Soviets in vital design and manufacturing know-how.
- Second, it should strictly control key dual-use products, including computer-aided design and manufacturing systems, large volumes of automatic test and inspection equipment, and, most important, the automatic test equipment that can alleviate acute Soviet qualitative deficiencies in the manufacturing of weapons and military equipment.

The ultimate goal should be to deny the Soviets access to Western documents, hardware, and technologies that will accelerate their military programs and simultaneously cause Western defense efforts and costs to increase. Soviet dependence on the West for technological innovation in military research and development and in modernizing Soviet production industries is broad. It is particularly important in microelectronics and computers, and extends to key areas that include command, control, communications, and intelligence (C^3I), computer-integrated design and manufacturing, and materials fabrication (table 5).

The United States and many other Western governments have begun to better recognize that their military and dual-use equipment and technologies have been improving the performance capabilities and manufacturing standards of Soviet weapons. Several positive steps have already been taken by the United States, Western Europe, and Japan, including selective expansion of the COCOM[1] list to deny the Soviets key items. Although the emphasis has varied among countries, most have undertaken individual programs to stem diversions and losses that include some of the following:
- Increased awareness programs, highlighting the magnitude, tactics, and detriment to Western security of the Soviet efforts.
- Improved export control efforts and enhanced law enforcement capabilities.
- Counterintelligence programs specifically targeting the technology transfer activities of hostile intelligence services and their Soviet co-optees and agents.
- Industrial security awareness programs conducted jointly by counterintelligence services, security services, and corporate security professionals.
- Soviet Bloc scientific visitor controls designed to screen high security risk visitors and, in the process, strengthen the spirit and integrity of academic exchanges.
- Better review of government open publications in the prepublication or predistribution phases.

In general, a more difficult operational environment for Soviet intelligence has resulted worldwide.

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[1] The Coordinating Committee (COCOM) was established in 1949 to serve as the forum for Western efforts to develop a system of strategic export controls. It is composed of the United States, the United Kingdom, Turkey, Portugal, Norway, the Netherlands, Luxembourg, Japan, Italy, Greece, France, the Federal Republic of Germany, Denmark, Canada, and Belgium.

Table 5
Examples of Dual-Use Equipment and Technology Likely To Be Targeted by the Soviets

Microelectronics

- Advanced Integrated Circuits
  - GaAs Devices
  - Memories
  - Microprocessors and Peripherals
  - Very-High-Speed Integrated Circuit (VHSIC) Devices
- Automatic Integrated Circuit and Printed Circuit Board Testers
- Chemical Vapor Deposition (CVD) Equipment, Especially Metal-Organic CVD Systems
- Computer-Aided Design (CAD) Systems
- Integrated Optics
- Ion-Beam and Plasma Etchers
- Ion-Implantation Equipment
- Lithography Equipment, Especially Electron-beam, Ion-beam, and X-ray Systems
- Molecular Beam Epitaxy (MBE) Systems
- Semiconductors
  - III-V and II-VI Compounds
  - Heteroepitaxial Materials
  - Specialized Crystal Pullers
  - Quality Silicon for Very-Large Scale Integrated (VLSI) Circuits

Computers

- Array Transform Processors
- Artificial Intelligence Systems
- Data Display Equipment
- High-Density Disk Storage Systems
- Internal Memories
- Software Development Systems
- Stand-Alone Mainframe Computers
- Supercomputers
- Superminicomputers

Command, Control, Communications, and Intelligence (C^3I)

- C^3I Software
- Computer Networking Systems
- Telecommunications
  - Fiber-Optics Transmission Systems
  - Digital Switching Systems
  - High-Speed Modems
  - Satellite Communications Systems
  - Terminal Displays

Computer-Integrated Design and Manufacturing

- Computer-Aided Design Software, Methods, and Equipment
- Computer-Aided Manufacturing (CAM) Software
- Computer Numerical Controls for Metalworking Machines
- Coordinate Measuring Machines
- Finite Element Analysis
- Flexible Manufacturing Systems (FMS)
- Plant Control Software
- Robotics

Material Fabrication

- Metals and Alloys
- Composites
  - High-Strength Fibers and Filaments
  - Carbon-Carbon Manufacturing
- Ceramics
- Materials Processing
  - High Temperature Resistant Coatings
  - Isostatic Presses
  - Lasers for Surface Conditioning and Material Processing
  - Material Joining and Bonding Equipment
  - Nondestructive Test and Evaluation Equipment
  - Precision Shapers and Formers
  - Vacuum Furnaces, Including Those for Single Crystal Growth

The worldwide diffusion of advanced products and high technology, however, clearly has increased Soviet collection opportunities. To take advantage of this, the Soviets can be expected to intensify operational acquisition efforts by:
- Expanding their use of contract diverters on a global basis.
- Increasing their dependence on surrogates among the East European intelligence services; increasing use of client states such as Libya, Vietnam, and North Korea.
- Increasing their exploitation of any vulnerable US and Western defense weapon system coproduction arrangements in Allied countries.
- Relying more on third-country espionage operations targeting US personnel and technology (mostly handling covert assets in areas outside the United States).
- Exploiting Third World trade entities dealing with US high technology (the Soviets contend that corporations, officials, and security services in those countries can be easily victimized).

- Attempting broader online access to US and other Western data base systems directly from the Soviet Union.

For effective countermeasures to keep pace with the evolving Soviet acquisition programs, in particular the highly effective operations of the KGB, the GRU, their surrogates among the East Europeans as well as unscrupulous traders, the West should accurately anticipate Soviet tactics. Western countries should continue to improve and modify their responses. In particular, the West needs to improve and refine its knowledge of Soviet military-technical needs and factor this knowledge into meaningful and practical, multilateral export control lists. Most important, however, must be increased multinational coordination of Western programs—for example, a systematic program among the Western customs services aimed at preventing the illegal export and diversion of militarily significant equipment in the face of what clearly will be a geographically expanding Soviet acquisition threat.

Much can be done to stem losses because much is known about Soviet efforts; it is not an insurmountable problem. But the Soviets' appetite for Western technology will continue to be voracious. They will continue to exploit any weaknesses in Western export controls, as well as policy differences among the COCOM countries, to acquire the technologies needed by their military programs for the late 1980s and beyond.

This effort is more difficult and costly for them than at any time in the past. The stakes are high and the Soviets know it; they will devote whatever resources and manpower are required to fulfill their most critical military collection requirements. The West can do no less if it is to succeed in protecting itself as well as frustrating their efforts. All in the West—governments and private industries—will need to participate.

Annex

Several Hundred Examples of Soviet Military Equipment and Weapons Benefiting From Western Technology and Products

There are hundreds of examples of Soviet military equipment and weapons of the 1980s and 1990s that have benefited or will benefit from the technologies and products of at least a dozen different Western countries. New and advanced technical directions will be incorporated into some of the weapon systems, subsystems, and equipment in each industrial area given below. The equipment in many projects will have their technical levels raised or project completion dates shortened principally because of the copying of design concepts embodied in Western technical documents, one-of-a-kind military hardware, and dual-use products.

Aviation

Four New Fighter Aircraft
New Tactical Fighter of the 1990s
A Supersonic Aircraft
Ground Attack Aircraft
Airborne Command Post
Reduced-Infrared-Signature Aircraft
Four Transport Aircraft
Reusable Space Shuttle
Air-to-Air Missile (US Phoenix-Like)
Fire-Control System for Three Fighters
Gas Turbine Engine
Ramjet Engine

Projectiles and Explosives

100-mm and 152-mm High-Explosive Shells
203-mm Artillery Shell
Sabot Design for Armor-Piercing Tank Round
Armor-Piercing Tungsten Penetrator Shell
23-mm Gun
Aviation Cluster Bomb
Remote Mining Shell Delivered by Artillery, Rockets, and Aircraft
Large Caliber Artillery Shell Casing
Small Caliber Ammunitions
Noise-Detonated Fuze
Microelectronic Radio Fuze
Millimeter-Wave Proximity Fuze
High-Efficiency Proximity Fuze for Mass Munitions
Antisubmarine Torpedo
Antisubmarine Missile
Munitions Testing Equipment
Thermal Decoy Target
Protective Blast Structure
Solid Propellant
Unmanned Target Plane Equipment

Armor and Electro-Optics

Space-Based Photoreconnaissance System
Infrared Space Reconnaissance System
Space-Based Missile Launch Detection System
Space-Based Infrared Image Processor
Synthetic Aperture Radar for Space Reconnaissance
T-55 Tank
T-64 Tank
T-64A Tank
T-64B Tank
T-72 Tank
T-80 Tank
125-mm Tank Gun
Industrial Gas Laser

- Aerial Frame Camera
- High-Altitude Aerial Camera
- Coordinate Measuring Machine
- Portable Antiaircraft Missile System
- Advanced Night Vision Device
- Small-Arms Night Sight
- Holographic Fire-Control System
- Laser-Guided Artillery Shell
- Laser Gyro
- Optical Computer for Tactical Ballistic Missile
- Diamond Turning Device for Mirrors for Future Laser Weapons
- Laser Rangefinder
- Antitank Missile
- Countermeasure Against US Antitank Guided Missile
- Automatic Gun Barrel
- New Artillery Gun Barrel
- Sniper Rifle and Machinegun
- High-Strength Gun Barrel from Electroslag Steel
- Automated Rolling Mill for Military Production

Missiles and Space

- A New ICBM
- A New SLBM
- Maneuvering Reentry Vehicle (MaRV)
- Strategic Cruise Missile
- Reusable Space System (Shuttle)
- Navigation Satellites
- Manned Space-Based Orbital Station
- Reentry Vehicle
- Carbon-Carbon Nosecone for Reentry Vehicle
- Missile Motor Case Material (Based on DuPont Kevlar 49)
- Surface-to-Air Missile
- Missile Fuel Tank
- Cryptographic System
- Telemetry System

Communications

- Aircraft-to-Submarine Communications System
- High-Altitude Video Reconnaissance System
- Video Processor for Space Reconnaissance
- Reconnaissance Radio Receiver
- Strategic Aircraft and Cruise Missile Communication System
- Fiber-Optics Communications System
- Electronic Countermeasure Station
- Signals Intelligence Equipment
- Narrow-Band Signal Analyzer
- Cryptographic System Scrambler
- Magnetic Recorder
- Fiber-Optical Cable
- Microcomputer for Communications
- Programmable Oscilloscope
- Digital Processor
- Printed Circuit Board Production Equipment for Communications
- Correctable Aerial Bomb
- Remotely Piloted Vehicle
- Electronic Page Teleprinter

Radars and Computers

- ABM Radar System Design
- Space-Based Oceanographic Radar
- Three-Dimensional Phased-Array Radar
- Over-the-Horizon Radar
- Shortwave-Band Aircraft Radar
- High-Capacity Computer
- Disk Drives for Ryad Computer
- Computer Software
- BESM-6 Computer
- Magnetic-Bubble Computer for Onboard Missile
- Computer Matrix Processor

Nuclear and High-Energy Lasers

- Nuclear Weapons Safety System
- Space-Based Nuclear Reactor
- Nuclear Reactors
- Naval Nuclear Reactor
- Water-Cooled Power Reactor
- Process for Reactor-Grade Zirconium
- High-Sensitivity Mass Spectrometer for Uranium Enrichment
- Isotope Separation Process
- Space-Based Microprocessor for a Detector
- Radiation Detector
- Airborne Military High-Power Carbon Dioxide (CO_2) and Carbon Monoxide (CO) Laser Weapon
- High-Power Gas Dynamic Laser
- Space-Based High-Energy Chemical Laser Weapon

Shipbuilding

- New Aircraft Carrier Catapults for High-Performance Airplanes
- New Submarine
- Submarine Quieting Equipment and Techniques
- Antisubmarine Torpedo
- Telecontrolled Torpedo
- Torpedo Missile
- Laser Submarine Wake-Detection System
- Radioactive Submarine Wake-Detection System
- Hydrophone for Aircraft-to-Submarine Communications
- Magnetometer
- Surface Warship
- Warship-Based Multitarget Radar Fire-Control System
- Sonar System for Nuclear Submarine
- Sonar for Surface Ship
- Sonar for Ships and Helicopters
- Sonobuoy
- Radiowave Underwater Communication System for Diver-Scouts
- Ship Demagnetizer
- Gyrohorizoncompass for Naval Ships
- Naval Gun

Electronics and Microelectronics

- Photolithography System
- Photomask Equipment
- Microelectronics Tester (Fairchild Corporation SENTRY-7 Design)
- LSI IC Circuit Mask Fabricator
- Microelectronics for Onboard Weapon Systems
- Large-Scale Integrated Circuit Tester
- Microprocessor (Motorola MC 10800 Series Design)
- 16-Bit Microcomputer
- Computers (Digital Equipment Corporation PDP Series Design)
- Micro- and Mini-computers for Military Purposes (AM 2900, LSI-11M, PDP 11/70 and REDAC Designs and Hardware)
- Memories for Onboard Radar Fire Control Systems
- Computer Memories
- New Semiconductor Thyristor for Military Equipment
- Charge Coupled Devices
- Traveling Wave Tube for Military Satellite Communications
- Space-Based Laser Communication System
- High-Power Microwave Tube for Onboard Radar Against Low-Flying Targets
- Laser Communication, Detection, and Ranging System (Hughes Aircraft Company 3800 Design)
- Infrared TV System
- MIG Aircraft Centimeter Waveband Radar with Onboard Digital Processing
- Compact Analog-Digital Converter
- Quartz Resonator
- Crystal Grower
- Power Generator
- Communication and Telemetry System
- Microwave Generator

Chemicals

- Hybrid Ramjet Engine for Cruise Missile
- Solid Rocket Propellant for Strategic Missile
- Polyethylene Production System
- Color Aerial Photographic Film
- Photographic Film for Air and Space Reconnaissance
- Photographic Film for Space Reconnaissance (Kodak 3414 Film)
- Antistatic Photoreconnaissance Film
- Low-Density Polyethylene
- Photoresist System for Microelectronic Photolithography
- Polyamide Composite Materials for Aircraft and Tank Industries
- Carbon Fiber Production for Aerospace Applications
- Radiation Hardening Paint for Radio-electronic Equipment
- Bonding Material for Spacecraft
- Ion-Exchange Resins
- Laser Systems for Remote Chemical/Biological Reconnaissance
- Fillers for Deep Sea Vehicles
- New Gas Mask

Electrical Equipment

- Space-Based Turbogenerator
- Tank-Mounted Infrared System
- Sodium-Sulfur Battery for Missiles, Space, Tanks, and Submarines
- Electric Step-Motors for Aviation Weapon Systems
- Power Sources for Missile Installations
- Space-Based Solar Power Cells
- Spacecraft Temperature Control System
- Ship Electrical Supply System
- Batteries for Naval Ships

Petroleum and Petrochemicals

- New Fuel for Strategic Cruise Missiles
- New Jet Engine Fuel
- Polyurethane Binders for Solid Rocket Fuels
- New Zeolite Catalyst for Motor Fuels
- Synthetic Motor Oil for Tanks in Arctic Areas (Mobil Oil Company)
- Synthetic Lubricant for Aerospace Equipment
- Radiation-Resistant Additives to Lubricants for Space
- New Lubricant-Coolant for Motor Vehicles
- Rubberized Fabric Inflated Seal for Supersonic Military Aircraft
- Industrial Rubber for Aerospace and Armored Vehicles
- Industrial Rubber Seals
- High- and Low-Temperature Fluoroelastomer for Aerospace and Armored Vehicles
- Improved Protective Gear for Astronauts and Pilots
- Radar-Absorbing Camouflage Coating

Position Statement

of the

ELECTRONIC INDUSTRIES ASSOCIATION

on Export Controls

for the

Subcommittee on International Finance and Monetary Policy

Committee on Banking, Housing and Urban Affairs

United States Senate

EIA is the Washington-based, full service national trade association for the electronics industry, with companies of all sizes ranging from small, single-product businesses to large multinational corporations. EIA members represent the entire spectrum of companies involved in the design, manufacture, and sale of electronic components, equipment and systems for communication, government, industrial and consumer use.

A large number of EIA-member companies are involved in the export of electronic products. In 1986, U.S. factory sales of electronic products were $206 billion of which $33.5 billion were exports. In the same year, approximatley 1.75 million Americans were employed in the electronic manufacturing businesses. We estimate that a significant portion of these jobs are tied directly to exports. Electronics are critical element in both our military and economic security. As the Defense Science Board stated in a recent report:

> "Electronics technology is the foundation upon which much of our defense strategy and capabilities are built. The United States has historically been the technological leader in electronics. However, superiority in the application of innovation no longer exists and the relative structure of our technology base in this area is steadily deteriorating."

Because of the importance of export sales to the electronics industry, EIA is concerned about the effect of U.S. export controls laws on the international competitiveness of EIA-member companies.

EIA recognizes the need to balance two critical interests, -- insuring our military security, and strengthening our economic security -- but these two interests are reconcilible only if we limit controls of products and technologies to those that would adversely affect our military security. EIA has consistantly urged revision of export control laws to enhance the competitiveness of U.S. companies. Many of our concerns have been addressed in S. 547 and S. 652.

While S. 547 proposes important improvements in our export control laws, much more is needed to achieve a proper balance of our government's desires to protect our national security and to promote economic security through increased competitiveness in the global market.

Specifically, EIA urges that:

--the Control List be simplified so that companies can easily determine whether or not their products are subject to export controls;

--the requirement for a license be eliminated for exports below the PRC green line to CoCom and 5(k) countries, and below AEN level worldwide;

--U.S. re-export controls be eliminated for CoCom countries and reduced for other free world destinations;

--realistic de minimis levels for control of incorporated parts and components be adopted as soon as possible;

--as recommended by the NAS study, the statutory requirement to integrate the MCTL into the Commerce Department's control list be withdrawn;

--the industry advisory role be strengthened in the interagency reviewing process;

--the U.S. CoCom delegation be required to include U.S. industry technical experts;

--the imposition of fees charged in connection with the processing of export licenses be prohibited;

--distribution-type licenses be made available for exports to China, and in addition, the Commerce Department be encouraged to establish GLV and GTE license privileges to China;

--adequate resources be not only authorized but appropriated for the Commerce Department to create a world model export control operation;

--there be a recognition that we need one, and only one, government focus for the formulation and implementation of U.S. export controls;

--in conjunction with our CoCom allies, the control list be reduced by the maximum extent feasible, with closer legislative oversight to ensure a periodic review of the list to adjust for advancing global technology;

--the U.S. take a leadership role to attain harmonization of all members' export controls systems;

--and finally, the CoCom list be published under approved CoCom security measures, and the implementation of CoCom regulations be harmonized by all CoCom members.

SIMPLIFICATION OF CONTROL LIST

At present, it is often impossible to determine, prior to application for an export license, whether or not the license will be approved. We must compete with foreign suppliers, both CoCom members and other Western country producers, who are able to predict with accuracy, exactly what they can sell to third country markets.

This contributes to the image of U.S. manufacturers as unreliable suppliers. Our foreign customers are beginning to cite U.S. unilateral export controls and stricter interpretations of CoCom regulations by the U.S. Government as the basis for seeking non U.S. sources. Our foreign competitors are using this as a marketing tool, and it is one to which we can have little credible response, based on past performance. They cite lack of U.S. supplier reliability, uncertainty with regard to approval of the U.S. export license, and processing time for a U.S. license as factors when marketing competing

products. This problem has become particularly apparent in the area of telecommunications which, in most markets, is controlled by a government ministry. In some cases, such as China and India, our government has actively urged us to sell in these markets, and has even sponsored telecommunications trade missions to these countries, but American companies trying to sell their products find it difficult to determine whether or not they will be able to obtain an export license for the product, or obtain one in a timely fashion sufficient to meet the customer's deadline.

We must remember that our overseas buyers are our customers, and have the right to expect--in fact to demand--the same service that we accord an American customer, that is, service before, during, and after the sale. Export controls should not be a barrier to business carrying out this mandate.

Furthermore, the regulations are written in such a manner that it frequently requires an engineer to determine under which category a product might fall, and a lawyer to determine which license is applicable. License applications are normally completed by clerical staff, and the current regulations are much too complex. We urge simplification and publication of the regulations, so that our member-companies might more effectively compete with foreign suppliers.

INCREASE ROLE OF INDUSTRY IN LIST REVIEW PROCESS

EIA recommends that one or more industry representatives be included in the interagency reviewing process.

Furthermore, we recommend that representatives of U.S. industry, who are knowledgable about the items being reviewed, be included in the United States' delegation to CoCom.

ACTION NECESSARY TO REDUCE EXPORT CONTROL LIST

EIA believes that every effort should be made to narrow, to the maximum extent feasible, the products and technologies subject to control. It makes little sense to strictly control products or technologies which have only marginal or no military utility to our potential adversaries. Such controls constitute an unnecessary burden on the private sector, a waste of already limited government resources, and a subsidy of sorts to our foreign competitors who need not go through equivalent procedures to compete with U.S. firms in third markets.

A reduction in the control list will lessen the licensing burden on American exporters and free up government resources to concentrate on the products and technologies that are most militarily critical.

One way to refine the scope of the export control program would be to continually review the products and technologies covered by the control list and revise technical parameters to remove any products and technologies which have become obsolete or obsolescent. Although such an approach is mandated by the 1985 changes to the law, it has been our experience that there have been only limited reductions in the control list.

At the CoCom level, the ECCN should be reviewed for decontrol of products and technologies as diligently as it is reviewed for the control of new and emerging technologies.

Another approach to narrowing the scope to the control list is to analyze the availability in Western countries of goods and technologies on the list. The current focus of foreign availability assessments is on determining which items are available in or to the Soviet bloc countries. This focus does not identify commodities readily available in free world countries, to which the U.S. controls our export of comparable U.S. items. EIA feels that such controls should be removed on a country-by-country basis, particularly when those countries join with us in controlling exports to the Soviet bloc. Also, controls should be eliminated on any products or technolgies which have been so widely dispersed that control is impossible for all practical purposes.

EIA is in the process of developing data to form the basis of recommendations for removal of currently controlled items based on foreign availability, lack of criticality of technology, or other reasons.

STRENGTHEN MULTILATERAL AND BILATERAL COOPERATION

If any program of export controls is to be truly effective we are going to need the cooperation of our allies and other countries in the effort. Today's Export Administration regulations were conceived, and intially written, at a time when the U.S. was the undisputed world leader in technology and innovation. This is no longer the case. Due to the dispersion of technology throughout the world, the U.S. will find it increasingly difficult to bilaterally prevent militarily critical dual-use products and technologies from falling in to the hands of our potential adversaries.

Thus EIA believes that it is imperative that every effort be made to strengthen the Coordinating Committee on Multilateral Export Controls to assure uniform applicability of multilateral controls on the exports of all allied countries. At the same time, efforts should be made to harmonize the control programs in each CoCom country, so that each CoCom member's policies and procedures are comparable.

Harmonized control programs in each CoCom country could serve as models for bilateral agreements with other countries or groups of countries. Such agreements could provide for a reduction in controls of exports to the foreign country in exchange for cooperation with the U.S. export control program. In negotiating these cooperative controls agreements, however, the U.S. must not "give away the store." In other words, these countries must abide by the same rules as the CoCom countries.

While a prudent reduction in controls to the CoCom countries and other cooperating countries would not have any adverse effect on our national security, it would save U.S. companies considerable cost and delay in international marketing efforts. Even license processing times of three to four weeks cause problems to American companies when allied countries process their companies' licenses much faster, or require no license at all.

Moreover, the reduction in unnecessary paperwork and administrative costs resulting from the lessening of West-West licensing requirements should result in significant cost savings to U.S. companies. This cost savings may be

reflected in a more competitive atmosphere for American products through lower prices or additional R&D investments.

In addition, the resources of the Department of Commerce could be shifted from processing license applications that are rarely or never denied to other areas where there may be greater threat of illegal diversion of U.S. products and technology.

REDUCE RE-EXPORT CONTROLS

Another critical issue for U.S. competitiveness is the issue of re-export controls. One of the most serious threats to U.S. export business is the requirement that the U.S. Government approve foreign exports of products manufactured abroad which contain U.S. parts and components. This extraterritorial reach of U.S. regulations is eroding our members' overseas business, especially in CoCom countries. Some of EIA's members have been advised by their foreign customers that they are avoiding the selection of U.S. manufactured parts and components in order to avoid U.S. unilateral re-export regulations. We have been told that, in many cases, there has been an intentional effort to "design out" U.S. parts and components. These customers resent having to obtain U.S. permission to export, in addition to complying with their own government' control system.

While a customer may not choose to incur the expense of re-designing a current product which contains U.S. components, he certainly will find it more cost effective to design future products around parts and components sourced from countries which do not impose this burden. EIA member-companies are extremely concerned about the "deAmericanization" of future foreign manufactured products presently on the drawing board. Losses due to "deAmericanization" are impossible to calculate accurately.

EIA advocates eliminating re-export controls with respect to CoCom and other cooperating countries, and reducing re-export controls with respect to other Western countries by eliminating re-export controls on parts and components when they constitute only a small percentage of the foreign-made product. On March 23, 1987 new Department of Commerce regulations were issued, eliminating re-export controls for foreign products containing U.S. parts and components when under twenty-five percent by value of the foreign product is of U.S. origin.

We applaud efforts by Secretary Baldrige to improve the system, and hope that other recent proposals will be implemented soon. Any steps to relax these controls would go a long way toward winning the good faith of our allies and would keep U.S. companies competitive in the parts and components business.

A similar problem exists generally, with required approval for re-export of U.S. origin finished products.

Frequently, over-restrictive controls hamper the formulation of joint ventures and other arrangements with foreign partners. U.S. extraterritoriality is often the sticking point. In a recent case, a member company, Martin Marietta, was told by a potential licensing partner that they had decided to shelve plans to work together based on "the attitudes and activities of the U.S. State Department and Department of Commerce, which are beginning to affect us adversely in some areas, both involving the use of imported items from the USA and and also the use of items incorporating licensed U.S. technology." They go on to say "We are thus reluctant at present to comtemplate taking on further dependence on the goodwill of these Departments, in areas that may be critical to our future business, if it can possibly be avoided." (Letter attached). We are seeing an increasing number of cases where U.S. companies are losing opportunities for joint ventures due to U.S. export controls. The joint venture is an important method of gaining access to otherwise closed markets, distribution networks, and other key elements of doing business in a foreign country.

While this case happens to be one where the product's primary application was a military one, the discussions between the two potential partners included possible future commercial applications.

AUTHORIZE DISTRIBUTION-TYPE LICENSES, GLV AND GTE PRIVELEGES FOR CHINA

Given the growth of U.S. trade with the People's Republic of China (PRC) and the increasing volume of license applications for U.S. exports to the PRC, EIA feels that the distribution-like license procedures, authorizing multiple exports of specified products to pre-approved customers, should now be made available for exports to China.

The distribution license would enhance our economic ties with the PRC by assuring regular customers there that re-orders and follow-up sales and spare parts can be shipped promptly. This would also reduce the workload on the U.S. Government, CoCom, and the U.S. industry for processing repeated license applications for similar transactions.

In addition, the Commerce Department should be encouraged to extend the privileges of GTE to China. This would permit demonstrations of U.S. equipment and allow our technicians to take test equipment and other tools of their trade to that country to maintain systems already sold.

The Department of Commerce should also be encouraged to establish a de minimis value for PRC in order that provisions of a general license GLV could be applied.

CONCLUSION

Various bills have been introduced this year which address our concerns. These include H.R. 3 and S. 490 the House and Senate versions of the High Technology Trade Promotion Act of 1987, S. 547, the Administration's Competitiveness bill, and others. EIA recognizes and applauds these efforts to address long-standing concerns regarding the system.

However, Congressional action is focussed toward further fine-tuning the current system in order to improve our competitiveness. We urge that, between now and the renewel of the Export Administration Act, Congress, the Administration, and our own colleagues in industry, search for a fresh approach encompassing the global changes which have taken place since this system was first enacted in 1949. Today, we should be asking ourselves, "What are the

parameters of an export control system best able to serve our country's needs in the twenty first century?"

In summary; the Export Administration Amendments Act has made a number of improvements in the way U.S. export laws are administered, but there is much more if United States industry is to be able to compete effectively overseas. Reduction should be made in both the number of products controlled and the number of countries to which such products are controlled. We urge the current regulations be simplified and clarified to improve certainty for U.S. companies marketing internationally. We urge also, however, that scrutiny be given to whether a different approach would not better serve our country's interest. We in industry would be happy to offer our assistance in this regard.